

# THE AMERICAN School Board Journal

A PERIODICAL OF SCHOOL ADMINISTRATION

Devoted to the Interests of School Boards, Superintendents,  
School-Business Officials, and School Architects



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VOLUME 87  
JULY—DECEMBER, 1933

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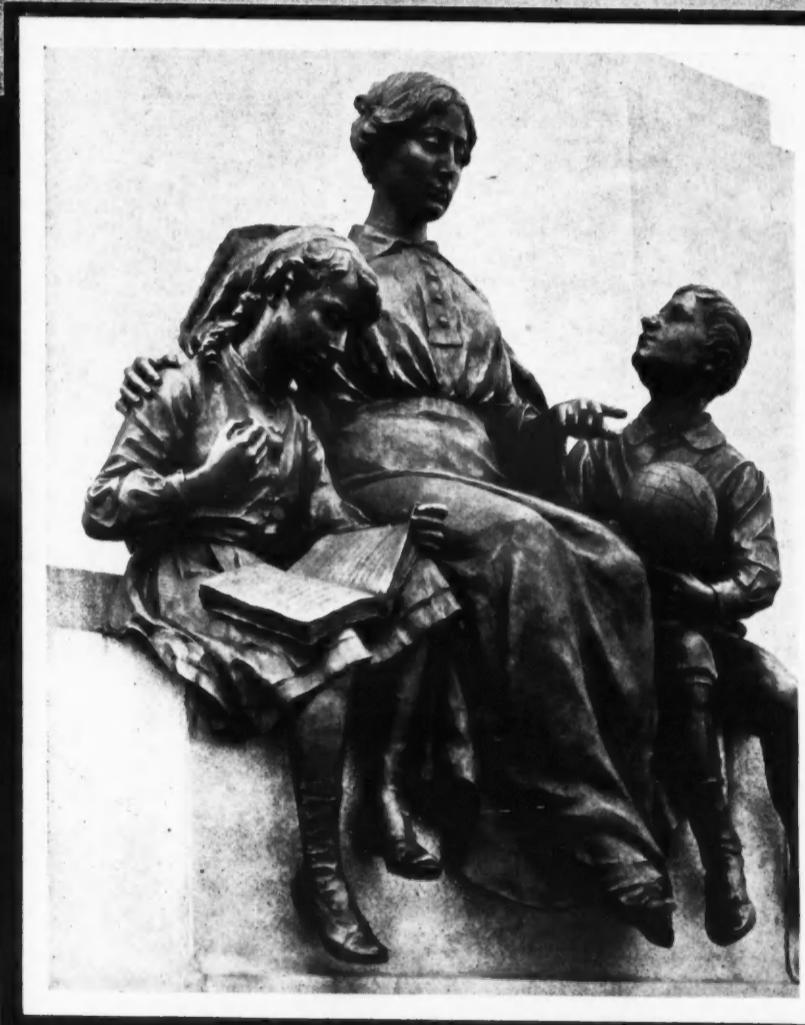
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# THE AMERICAN School Board Journal

A Periodical of School Administration



The Bruce Publishing Company

MILWAUKEE

NEW YORK

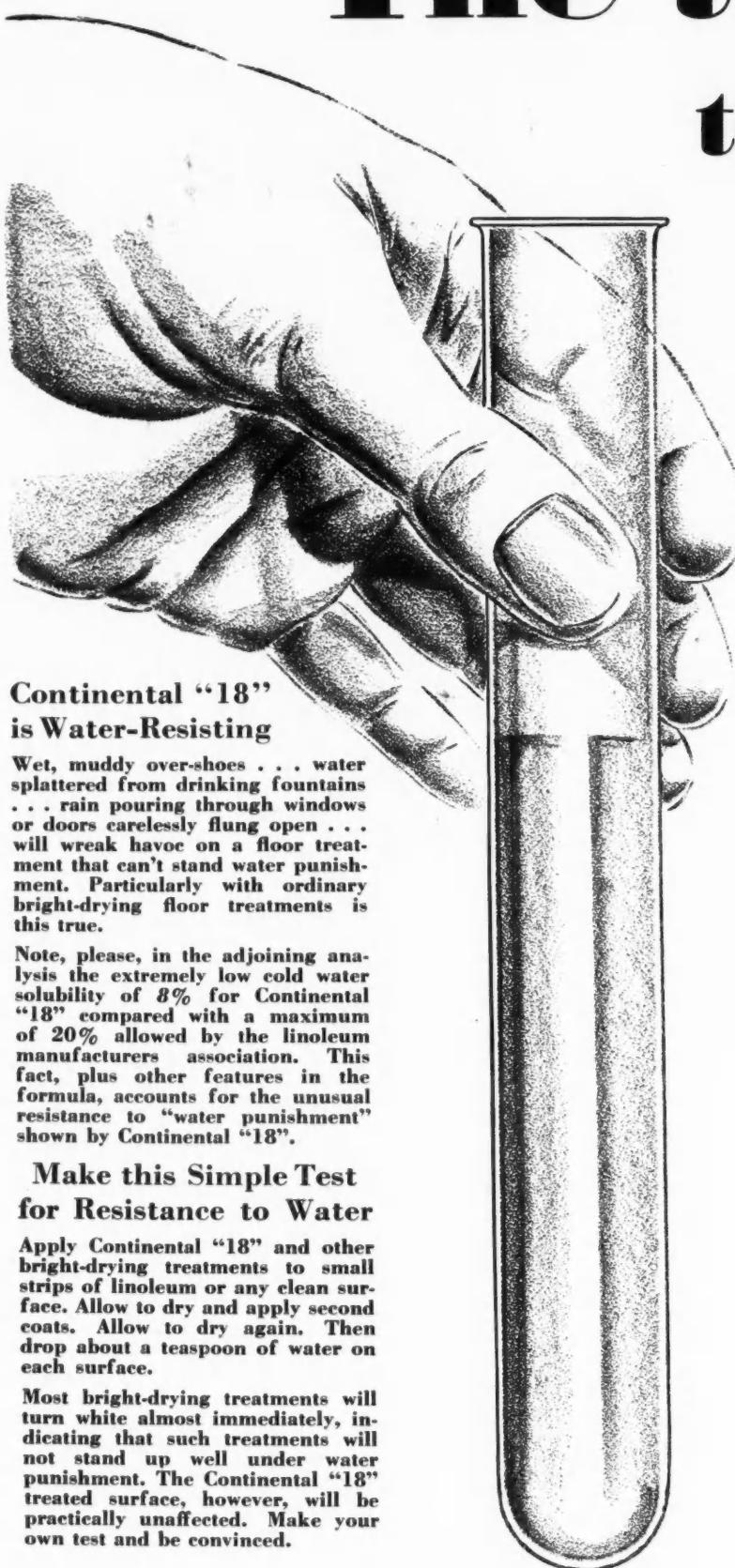
CHICAGO

VOLUME 87, NO. 1

JULY 1933

HUNT BROS.

# The test tube tells the Story. .



## Continental "18" is Water-Resisting

Wet, muddy over-shoes . . . water splattered from drinking fountains . . . rain pouring through windows or doors carelessly flung open . . . will wreak havoc on a floor treatment that can't stand water punishment. Particularly with ordinary bright-drying floor treatments is this true.

Note, please, in the adjoining analysis the extremely low cold water solubility of 8% for Continental "18" compared with a maximum of 20% allowed by the linoleum manufacturers association. This fact, plus other features in the formula, accounts for the unusual resistance to "water punishment" shown by Continental "18".

## Make this Simple Test for Resistance to Water

Apply Continental "18" and other bright-drying treatments to small strips of linoleum or any clean surface. Allow to dry and apply second coats. Allow to dry again. Then drop about a teaspoon of water on each surface.

Most bright-drying treatments will turn white almost immediately, indicating that such treatments will not stand up well under water punishment. The Continental "18" treated surface, however, will be practically unaffected. Make your own test and be convinced.

Analysis made by Pittsburg Testing Laboratories proves Continental "18" better than Standard specifications

Below is a recent analysis of Continental "18" . . . a bright-drying, scientifically prepared emulsion of wax and gums . . . which should be of interest to every school superintendent now considering the problem of floor treatment and maintenance. The Pittsburg Testing Laboratories is the official testing laboratory for the linoleum manufacturers association.

Compare, if you will, please, the analysis of Continental "18" with the standard specifications of the linoleum manufacturers association also given below. The test tube predicts important advantages for Continental "18" which practical use confirms.

### Comparative Laboratory Analysis

	Continental "18"	Standard Specifications
Total Solids	17.58%	not less than 12%
Insoluble in Alcohol	0.29%	not more than 3%
Free Alkali	none	not more than .15%
Free Alkaline Salts	0.06%	not more than .25%
Insoluble in Water	0.11%	not more than 1.00%
Cold Water Solubility	8.0%	not more than 20%

Water Resistance (Standard Specifications)—Film shall not turn white, show any cloudiness or opacity, and its adhesion to the linoleum shall not be impaired.

Water Resistance (Continental "18")—Film showed no cloudiness and its adhesion was very good.

Because of the splendid showing made in the analysis of Continental "18", official approval of this product has already been extended by the Armstrong Cork Co., and other members of the association. Also tested and approved by the Rubber Manufacturers Ass'n., Stedman, U. S., and Wright Rubber Co., Tile-Tex Co., Oak Flooring Mfg. Ass'n.

**Continental Car-Na-Var Corp.  
Brazil, Indiana**

# CONTINENTAL "18"

A GUARANTEED  
Made by the

Every school superintendent interested in the efficient and economical maintenance of floors should have a copy of "Floor Research." Written by a nationally known floor consultant. Mail coupon for free copy.

THIS \$1 BOOK FREE

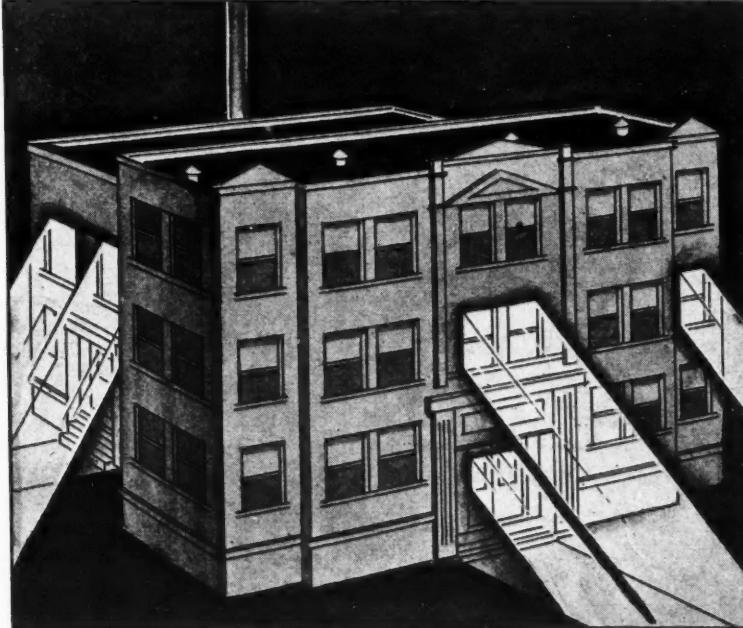
**EEC FLOOR TREATMENT**  
Makers of **CAR-NA-VAR**  
THE PERFECT FLOOR TREATMENT

Continental Car-Na-Var Corporation  
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Without obligation send me FREE copy of "Floor Research." Also send me further details about TRI-C Floor Treatments and your FREE test offer. (Write name and address in margin below.)



# Only Occupied Rooms



## ARE HEATED!

ECONOMY

made possible by the

JOHNSON  
DUAL SYSTEM of

Temperature Control

And JOHNSON DUAL THERMOSTATS . . . In SCHOOLS, OFFICE BUILDINGS, CHURCHES, LODGE HALLS—almost every type of building—there is a time during the day or night when only a few rooms are occupied. JOHNSON DUAL HEAT CONTROL allows the heating of occupied rooms to suitable temperatures while unused sections of the building are maintained at a reduced temperature.

There is an "ECONOMY TEMPERATURE" for every building, depending upon the location and extent of the structure, the type of construction, the kind of heating plant, and various other considerations. It is not economical to allow the temperature in the building to fall below that ECONOMY TEMPERATURE.



Each JOHNSON DUAL THERMOSTAT is arranged to operate at either of two temperatures—a normal "occupancy" temperature and a reduced "economy" level . . . All of the thermostats in the building are set to the reduced temperature at the close of periods of normal usage simply by the operation of a switch at a central location. By pushing a button on the thermostat in the room, the occupant may restore that one room, and that room only, to operation at the normal temperature . . . Or the DUAL THERMOSTATS may be connected in groups, so that various sections of the building may be operated separately. Even then, a single room may be cut from the group operation.

JOHNSON SERVICE COMPANY

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**JOHNSON**  
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# SLOAN FLUSH VALVES for modern schools



ACCURACY

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**Automatic  
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for  
Heating, ventilating, and air  
conditioning equipment.  
Hot water heaters.  
Shower baths, individual,  
group, gang, and zone.  
Phone or write our nearest branch  
office for estimate and complete in-  
formation (see your phone direc-  
tory).

**THE POWERS REGULATOR CO.**

40 Years of Specialization in Temperature Control

Chicago: 2721 Greenview Ave. New York: 231 E. 46th St.

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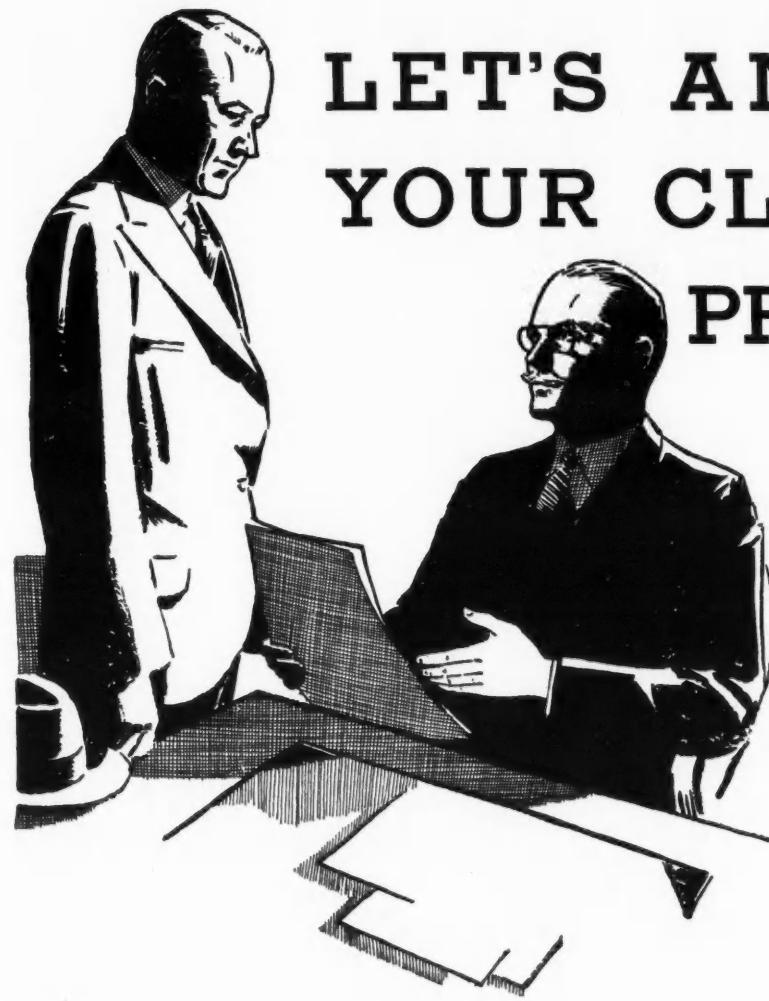
**TO-MORROW'S  
HEATING AND  
VENTILATING UNIT**

**S**chool boards are discovering that the principal problem in heating and ventilating occupied classrooms is not the addition of heat but the removal of heat. Universal Duo-Luxe Units and Buckeye Heatovents function accordingly: they control both the minimum temperature of the air stream, preventing drafts, and the maximum temperature, preventing overheating—that is, they deliver **Syncretized Air**. They are TODAY'S most economical unit ventilators; and as fast as State codes are revised to overcome the wasteful, unnecessary heating and circulating of large quantities of outdoor air, these units can be quickly and cheaply modified to further save about two-thirds of the fuel now required for ventilating. Thus they are also TO-MORROW'S most economical unit ventilators!

Get the complete story by writing to John J. Nesbitt, Inc., Holmesburg, Philadelphia, Pa., or Buckeye Blower Company, Columbus, Ohio



**TODAY**



## LET'S ANALYZE YOUR CLEANING PROBLEMS

You know, of course, the number and the importance of the cleaning operations under your supervision. But have you ever considered the value of spending an hour or so in a thorough discussion of your cleaning problems with a highly trained specialist?

This is part of the service which is yours without obligation. For Cleaning Headquarters will be glad to send into your office, at your request, a Service Representative who is competent to discuss your cleaning operations and point out methods which may be more satisfactory and economical.

Whether you are using Wyandotte or not, whether or not you ever use Wyandotte, this service is available to you. It costs you nothing and places you under no obligation.



THE J. B. FORD CO., Wyandotte, Mich., Dept. H-71

I'd like to have your Service Representative call.

Name \_\_\_\_\_

Position \_\_\_\_\_

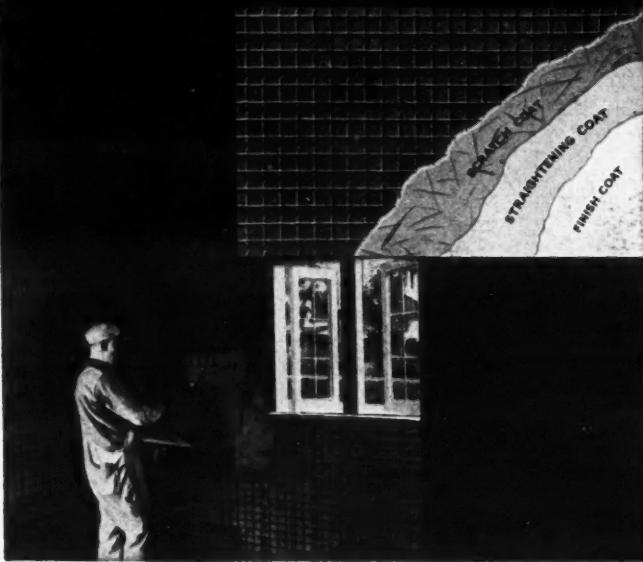
School \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

THE J · B · FORD COMPANY  
WYANDOTTE, MICHIGAN

# ✓Check these 14 points



Pittsburgh Steeltex Plaster Lath is a network of cold-drawn, zinc-coated (galvanized), copper-bearing steel wire, electrically welded, attached to a heavy, tough, fibrous backing. The wet plaster flows around the wire, and adheres firmly to the fibrous backing by its instant bonding action. The result is a solid plaster slab thoroughly reinforced against strains at all points. Pittsburgh Steeltex Plaster Lath has these 14 highly desirable features:

1 Embedded reinforcing of zinc-coated (galvanized) copper-bearing steel wire fabric.	✓	8 Assurance of proper and uniform plaster thickness.
2 Insulation.	✓	9 Prevents lath marks from showing on finished plaster.
3 Sound retarding.	✓	10 Minimizes cracking.
4 Automatic back-plastering.	✓	11 Carries the underwriters' 1-hour fire rating.
5 Strengthens framework of building.	✓	12 Instant bonding action.
6 Added security over suction or plaster keys.	✓	13 Aids curing of plaster.
7 Angle reinforcement at no added cost.	✓	14 Easiest handled lath.

## Pittsburgh Steeltex Plaster Lath

PITTSBURGH STEEL CO. • Union Trust Building • Pittsburgh, Penna.  
Gentlemen: Please send me complete information about:

Pittsburgh Steeltex Plaster Lath  Dealer's Proposition

Name: \_\_\_\_\_

Address: \_\_\_\_\_

1 Evergreen towel +  
2 wet hands =  
greater drying efficiency



Simple arithmetic proves the greater economy of the Evergreen Double Duty Towel. Double thick . . . with five to six times more absorption . . . greater wet strength . . . one Evergreen towel does the work of several ordinary towels. Not a claim but a fact . . . proven at school washstands . . . the only test that counts. Cross-creping gives the linen-like softness that a towel for children's use should have. And for an equally economical laundry service use Evergreen Toilet Tissues. Highly absorbent, softer and safer, with no sharp edges or harsh surfaces, they meet every test for quality and satisfaction.

**HOBERG PAPER & FIBRE CO.**  
Manufacturers—Green Bay, Wis.

An exclusive Evergreen process impregnates Evergreen personal-use papers with boric acid, the safe, efficient antiseptic . . . an added protection, yet you pay no more.

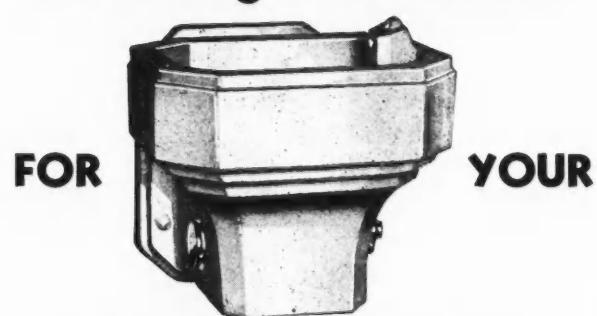
## DOUBLE DUTY TOWELS Evergreen

### TOILET TISSUES

the surety  
of safety



## Specify RUNDLE-SPENCE Drinking Fountains



FOR YOUR

### REPLACEMENTS

The design and construction features of the R-S line assure you of sanitary, beautiful and practical drinking fountains that are economical and serviceable.

Illustrated here is the Model No. 122 Wall Fountain. It is symmetrically designed, mechanically perfect and available in six colors to harmonize with any school interior.

The advanced sanitary standards of this Rundle-Spence Model are evident in the angle stream non-squirting jet and the placing of the nozzle orifice above the bowl rim to prevent contamination if drain clogs.

There are many other wall and pedestal models in our complete line. Write for illustrated catalog.

**RUNDLE-SPENCE MFG. CO.**  
444 No. Fourth St. Milwaukee, Wis.

**The George Washington School  
in Lancaster, Penna. is glazed  
with L·O·F Double Strength "A"  
QUALITY WINDOW GLASS**

L·O·F Improved Quality Window Glass is used in so many schools and other public buildings because it is flatter, brighter, clearer and gives more even reflections. Fine glass adds the final note that lifts a structure from the realms of the commonplace and makes it a distinctive and memorable creation of architectural design. Be sure that you are fully informed about L·O·F Improved Quality Window Glass before passing on the specifications for school buildings in your community. Ask your architect.



Architect: Henry Y. Shaub; General Contractor: Herman Wohlsen's Sons.

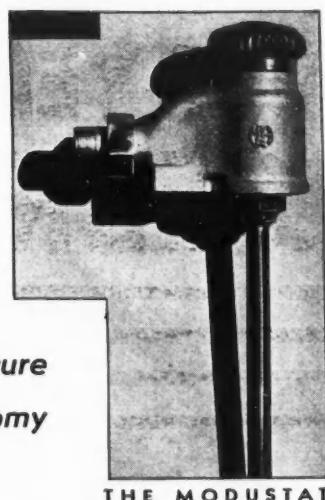
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TOLEDO, OHIO, manufacturers of Highest Quality  
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QUALITY GLASS**

For Old  
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New, Large  
or Small . . .

Accurate Temperature  
and Greatest Economy  
with the



THE MODUSTAT

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THE Minneapolis-Honeywell Modutrol System, with the Modustat automatic orifice system of individual room temperature control and electrical modulation of recirculating air systems, completely meets all the varied and exacting problems of providing correct and accurate temperature control for schools —where it is most needed . . .

Installation, as well as operating costs are equally low in old or new, large or small buildings. There is a Minneapolis-Honeywell engineer in your city, or near it, who can show you the advantages of the Modustat System . . . Minneapolis-Honeywell Regulator Company, 2830 Fourth Avenue South, Minneapolis, Minnesota.

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you money. Now is the time  
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more schools  
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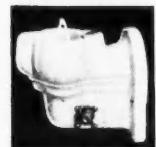
Without obligation, write A.P.W. Paper Co.,  
Albany, N. Y., for samples and/or name of  
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In George Washington School  
Lancaster, Pa.



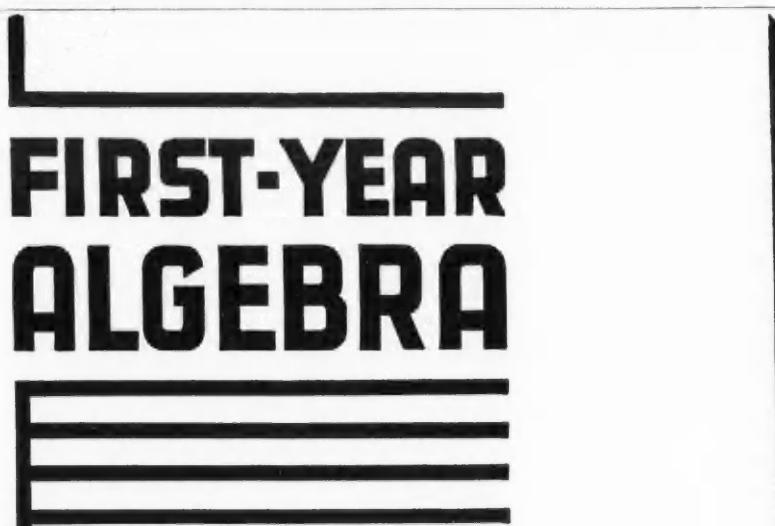
... you will find these fountains

In this new modern educational center health-safe drinking water is assured through the use of Halsey Taylor Drinking Fountains. Practical automatic stream control guarantees a drinking mound uniform in height and sanitary beyond question. Write for the facts about these most modern and safest of all drinking fountains.



No. 605, (wall type) as illustrated, and No. 610 (pedestal type) were installed in this building.

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The TUCKER'WAY all wood folding chairs are as strong as an ox and we believe will hold an elephant. On a recent test, we piled seven anvils, weighing 720 pounds, on a single chair, and it showed no signs of "fatigue." (That's all the anvils we could borrow.)

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Folds  
Flat



### Well Built-Won't Tilt

These chairs are rigidly built so there are no annoying rattles or squeaks to disturb students or teachers. There is no metal to tear clothes or stockings, nor pinch the fingers. The TUCKER'WAY won't warp, can't rust, and if left in the rain, won't turn white. They fold flat and stack as easily as pancakes.

*Easy*

### To Open-To Close

TUCKER'WAYS are easy to open and easy to close—with the foot. The large roomy seat makes them EASE-y to sit in. They are easy to "Tuck" away in a jiffy, and require but little storage space.

These chairs are made in regular and juvenile sizes, in natural (Beech) finish. Also in a variety of vivid colors—Orange, Jade Green, Chinese Red, French Blue, and Black or Walnut on special orders. Made singly or in sections.

#### Send for Samples & Catalog!

Send for a sample of either or both sizes and see for yourself the strength, comfort, and other features that make the TUCKER'WAY an ideal school chair. Samples may be returned or kept as part of order. (No free samples.) Detach the slip below and mail today for samples and catalog.



### TUCKER DUCK & RUBBER CO.

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WAREHOUSES: Brooklyn, N. Y.; Philadelphia, Pa.; Atlanta, Ga.; Chicago, Ill.; Minneapolis, Minn.; Kansas City, Mo.; Dallas, Texas; Houston, Texas; New Orleans, La.; Oklahoma City, Okla.; Memphis, Tenn.; Denver, Colo.; Cincinnati, Ohio; Boston, Mass.; San Francisco, Calif.; Tacoma, Wash.; Los Angeles, Calif.; Jacksonville, Fla.; St. Louis, Mo.

Tucker Duck & Rubber Co.  
Dept. E-18, Fort Smith, Ark.  
Send Sample (none free) of:

- TUCKER'WAY
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- 1933 Catalog

Name .....

Address .....

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FULL fifteen miles away a falling tree snaps a power-line. Instantly your school lights flicker out. Seconds seem like minutes, minutes like hours, as peering eyes try to find the way in the sudden gloom. It may be nothing more than an inconvenience, but danger may be lurking in that darkness.

It is a situation that can be, and should be, entirely guarded against. Install an Exide Emergency Lighting Battery System. Then, if power fails, Exide Batteries take over the lighting job instantly and automatically.

Power companies can't help storms, accidents, and other such accidental causes of electric current interruption. But an Exide Emergency Lighting System is insurance that costs little, yet is vital to school safety. Priced now from \$150 up. For complete information write direct to Exide.

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## At Your Service!

This directory offers a definite service to the schoolman engaged in the planning of new school buildings or the renovation of old ones.

The architects listed here are experts in the planning and construction of school buildings. Years of experience and careful study have qualified them for the rôle of trusted advisors and consultants. Their service has been thoroughly investigated and the acceptance of their advertising with THE AMERICAN SCHOOL BOARD JOURNAL takes the form of an official stamp of approval on their qualifications as school-building specialists.

When planning a new school building or addition, USE THIS DIRECTORY as your guide in selecting the service of an expert who is thoroughly acquainted with the multiple problems involved in the planning and construction of a modern school plant.

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and

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For Classrooms and Corridors

ESPECIALLY designed for suspending heavy pictures, map cases, taxidermy exhibits, statuary, etc. One of many KNAPP METAL TRIM items particularly adapted to new or old school buildings. Also provides a convenient open raceway for bell wires, intercommunicating telephones and other low tension services.

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3/4

IRON  
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## FENCES

CHAINLINK  
WIRE

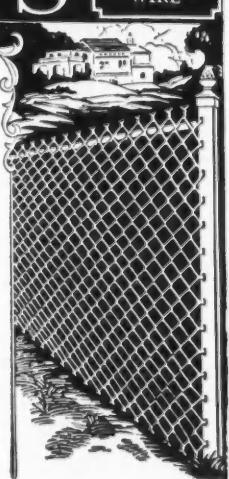
More Necessary Today  
Than Ever Before!

Faster automobiles . . . more congested traffic . . . less play areas for children . . . these are the conditions that have prompted the increasing demands for school-yard Fencing.

Stewart Iron and Chain Link Wire Fences have proven their worth ten-fold in protection — in service — in the assurance that children are safe within their bounds.

Literature and address of local Stewart office on request.

**Stewart** IRON and WIRE  
FENCES  
The STEWART IRON WORKS CO.  
Incorporated  
905 Stewart Block Cincinnati, Ohio



Replace old type locks with the NEW

TRADE **YALE** MARK

**COMBINATION LOCKER LOCKS**

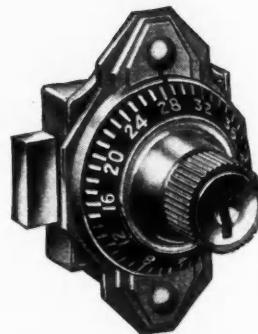
DO away with the nuisance of lost keys, add greater security and make supervision easier by equipping your lockers with this fine new YALE LOCK.

Designed for replacement of flat-key type locks on all makes of steel lockers. Operates with a dead bolt which is thrown by turning the knob to locked position, automatically dispersing combination. Available in either cadmium or chromium finish. Built like a YALE Bank Lock—large dial, numbers easily read.

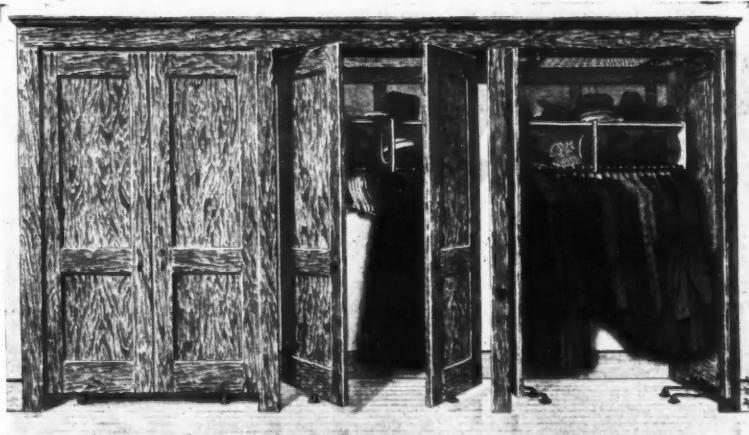
Combination may be changed without removing the lock from the door.

Write to us for an estimate or other information.

**THE YALE & TOWNE MFG. CO.**  
STAMFORD, CONNECTICUT, U. S. A.



These locks are furnished with or without master-key control.



**EVANS**  
"Vanishing Door"  
**WARDROBE**

**Class J**  
equipped with either "Floor" type (as illustrated) or "Jamb" type hinges. This is Class D wardrobe if made with flush doors.

**CLASSROOM WARDROBES**

**High in Quality — Low in Cost**

This type occupies a recess flush with the wall. Plaster back and ends. No partitions, but with mullions between pairs of doors. Wire mesh ceiling. Blackboards if required.

The "Vanishing Door" hinges on which the doors are hung are made with double pivoted arms and swing the doors back into the wardrobe entirely out of the way. Simple—trouble-proof—and last as long as the building.

Wardrobes are furnished complete in the knock-down, with all woodwork cut to size, and only need to be nailed in place. The hinges are easier to put on than common butt hinges. The cost of installation is small.

We make many other types of school wardrobes, fully illustrated and described in Catalog "M." Send for your copy.

**W. L. EVANS**  
WASHINGTON, INDIANA, U. S. A.



**SAVE MINUTES  
and SCHOOL DOLLARS  
WILL GO FURTHER...**

Today's school time is more valuable than ever before .... each minute saved and used to better advantage helps to reduce the teaching cost per pupil.

International Electric Time and Program Systems in hundreds of schools have proved their ability to turn wasted minutes into productive channels .... to make more time available for student development.

Administrators, released from the tedious routines of schedule control and maintenance, may devote more time to constructive supervisory work. Class movement is accomplished in less time and without hurry or confusion.

Clocks and bells in every classroom are kept automatically in agreement .... thus insuring exact adherence to all schedules and preventing period over-lapping.

These are but a few of the ways in which International Self-Regulating Time Equipment saves school minutes....and operating funds.

*International Electric Time is official time at the Century of Progress Exposition ... a single system providing 424 acres of grounds and buildings with clocks that automatically maintain their own accuracy.*

An International representative in your vicinity will be glad to give you full details and actual demonstrations.

**INTERNATIONAL TIME RECORDING CO. DIVISION  
International Business Machines Corporation**

International Time Recorders and Electric Time Systems — International Electric Tabulating and Accounting Machines — International Industrial Scales — Dayton Moneyweight Scales and Store Equipment

GENERAL OFFICES  
270 Broadway  
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Branch Offices and Service  
Stations in all Principal  
Cities of the World

# Where Shall We Buy?

*“You in your small corner and I in mine,” has grown into a philosophy—a philosophy of good business procedure.*

***The druggist is not a doctor and he declines to perform that service. He supplements the doctor's service.***

William Feather gives voice to the same philosophy of business. "When I acquire an automobile I want to deal with someone who is dependent for his livelihood on the buying and selling of automobiles . . . . The profit I pay the established, reliable and experienced dealer is small compared to the risk that would be incurred if I tried to negotiate a trade without his expert knowledge . . . . An analysis of business beginning with the cobbler and ending with the United States Steel Corporation will reveal a relationship involving this identical element of mutual benefit."

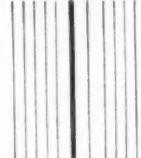
There are those who would advise on how schools should be run. Admittedly they do not have the background to match judgments with the professionally trained school executive or to instruct as adequately as the trained teacher. But they would invade the school executives' domain.

There are a few in the school administration field who would invade the commercial field and attempt to play a double role, who would organize group purchasing associations based upon artificial boundaries. This group purchasing is spasmodic of organization and short lived because there is no legitimate field of operation.

The School Industry has its own particular field of operation. It has organizations whose functions are to buy and sell—and they have served the schools well. It has a wealth of background and experience in that field. The School Executive has a high place in the professional field of education.

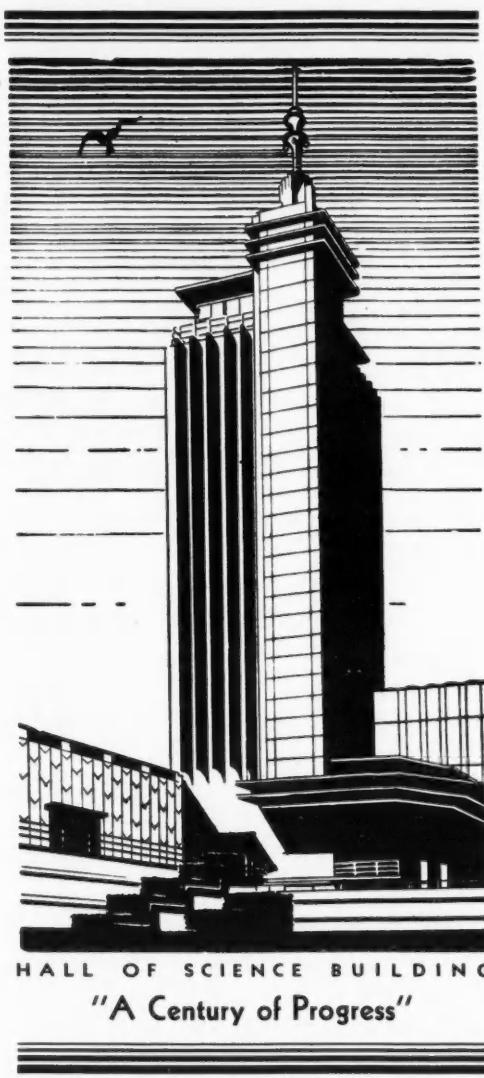
Any attempt for one to branch out into the field of the other is an attempt at new explorations, new experiments—experiments that may be interesting but costly. Greener pastures beyond are always alluring but usually deceptive. Unnatural units in group buying are one of these.

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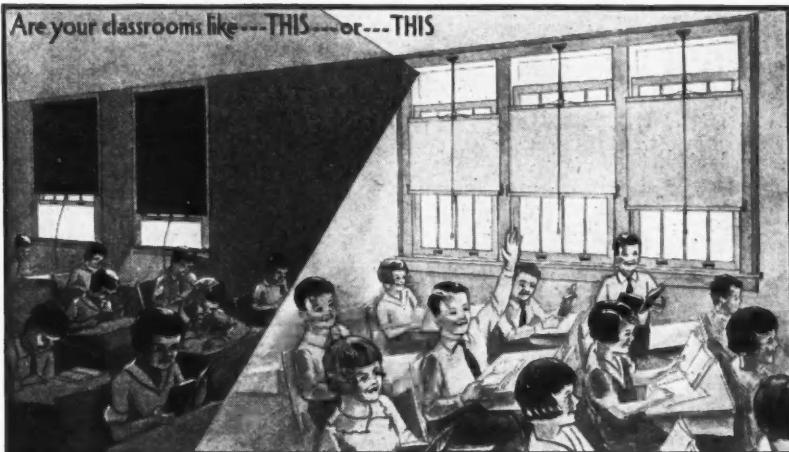
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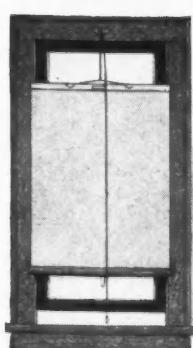
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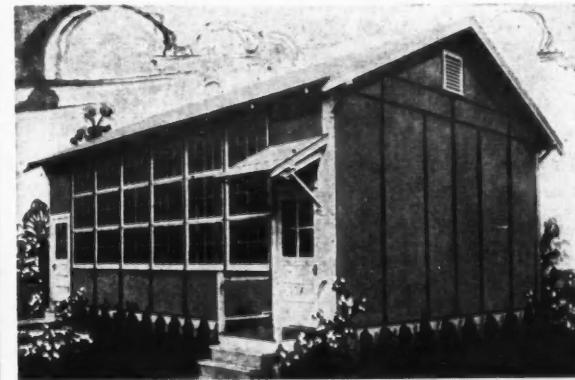
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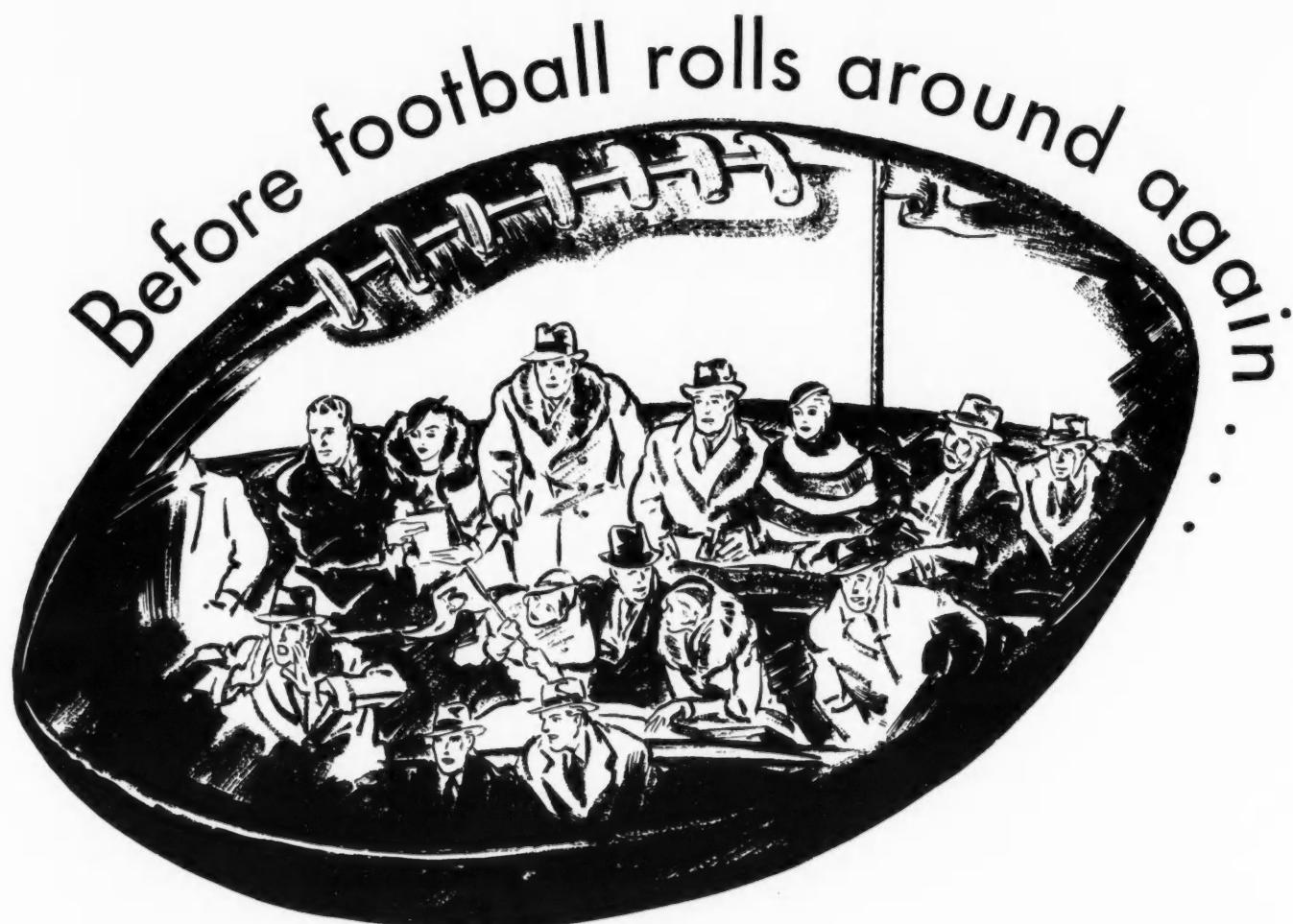
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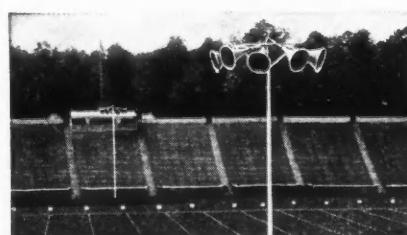
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VOL. 87  
No. 1

# THE AMERICAN School Board Journal

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## The Matter of Timely Anticipation

The era of retrenchment and the slashing of school costs has about spent itself. The bottom has been reached. In the school field a reduced tax income has found expression in a revised budget. The salary schedules and the supply items have been cut. Capital asset outlays have been suspended altogether.

The latter statement means that the planning and construction of new school buildings has been deferred to a time when conditions are more favorable. That time will shortly arrive when property values are restored, when rental rates are normal again, and the taxes are being paid. And that's that.

But what is going on in the meantime? Is school population a matter of growth or decline? Some countries in Europe estimated, owing to the low birth rate during the world war, that five years later school attendance would be materially reduced. They were right. That same reasoning, however, did not hold in our own country. Wars and industrial depressions are both bad. But they are not the same. The one reduces population, the other does not.

Here and there we note that the schools are crowded. Last year schoolhouse construction had already declined. This year there has been a further suspension in building operations. The cry for more schoolhousing is already heard and will gradually become more pronounced.

Babson, the economist, says real-estate values are rapidly coming back. If this be true, and we believe it is, then taxation will once more become stable and dependable. And that means a look ahead on the schoolhouse question. Allow the children to crowd a little longer, but be prepared to act when the break of a brighter day comes. Every school child is entitled to ample space in a schoolhouse suited to his educational needs.

THE EDITOR.

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The contents of this issue are listed in the *Education Index*. Member, Audit Bureau of Circulation and Associated Business Papers.



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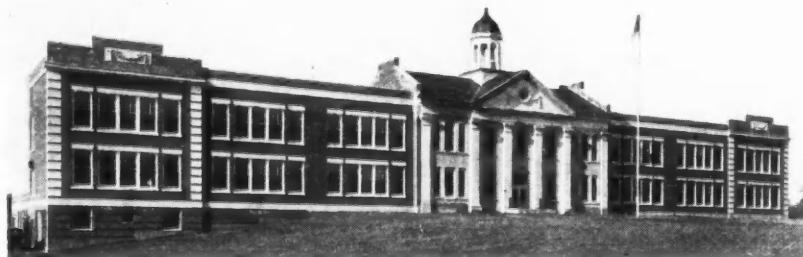
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# THE AMERICAN School Board Journal

Volume 87, No. 1

JULY, 1933

Subscription, \$3.00 the Year



THE EFFICIENCY OF THE SCHOOLS MUST BE UPHELD!

# To the Members of the Department of Superintendence: Open Letter Number Three

## The Joint Commission on the Emergency in Education

President Rosier of the National Education Association, and retiring President Potter of the Department of Superintendence realized that the national situation in public education was so serious that it demanded immediate and joint attention. For this reason they appointed the Joint Commission on the Emergency in Education. Its members are John K. Norton, chairman, Teachers College, Columbia; Mrs. Blanche Preble, Chicago public schools, president of the Classroom Teachers Association; Herbert S. Weet, A. L. Threlkeld, and David E. Weglein, superintendents of schools at Rochester, Denver, and Baltimore, respectively; J. B. Edmonson, dean, School of Education, University of Michigan; and Sidney B. Hall, state superintendent, Virginia. Dr. Carr, research director of the N.E.A., and S. D. Shankland, secretary of the Department of Superintendence, are ex officio members.

It is difficult to see how a better balanced Commission could have been selected. They have worked continuously since their appointment on a program designed to stimulate interest in, and knowledge of, our national educational crisis.

The Commission has held conferences in Kansas City, Chicago, Atlanta, and Cincinnati. To these conferences were invited men from the surrounding territory. In general the program consisted of an exhibit of effective publicity material, reports from the delegates, discussions, and the formulation of a report. This interchanging of experiences was most valuable because those in attendance carried the story of the conditions as disclosed at the conference to a larger group who could not attend.

I attended the Chicago and Cincinnati conferences and came away convinced that the Commission has undertaken a most valuable piece of work.

In addition to these conferences the Commission has a radio program with which you may be familiar. Speeches have been made by such men as Dr. Strayer, Dr. Frank, Senator Capper, Stuart Chase, Professor Frankfurter, Hon. Bainbridge Colby, Secretary Ickes, Mr. Filene, and many other well-known and illustrious men. The effect of these broadcasts is difficult to estimate, but in total it will be great. They will be continued.

Not content with radio programs and regional conferences, the Commission has prepared and has under way a series of publications which are very fruitful. The last issue of

the *Secondary School Principals Bulletin No. 46* is a case in point. "The Schools and the Depression — A State by State Review" is an excellent summary of conditions in the public schools of the United States. It was issued in May, 1933, and is valuable in that it enables every superintendent to have accurate and timely information on national educational conditions.

On the evening of July 3, in connection with the N.E.A. at Chicago, a monster mass meeting will be held in the Shrine Temple. It will be addressed by Governor McNutt of Indiana and President Glenn Frank of Wisconsin.

From July 30 to August 11 this year a conference will be held at Teachers College, Columbia, attended by economists and schoolmen of high and low degree for the purpose of analyzing our national situation and suggesting remedies therefor.

Needless to say the members of the Commission and the 475 advisory members do not receive a cent of extra compensation. They are doing yeoman service for our public schools. By next fall we may look for the greatest and most intelligently planned offensive that organized public education has ever launched.

At last we have developed a national educational consciousness. We have learned that, in education as in banking, no community lives unto itself. If our educational system breaks down — whether that breakdown occurs in remote and obscure places or in large cities — it is a matter of concern to every community and every state.

When we speak of the Commission as "fighting" for education, we speak in metaphor. They are not fighting for themselves, nor for us, but for the children of this depression.

If you are interested in detailed information about the work of the Joint Commission on the Emergency in Education, write to Secretary Shankland at Washington. He can send you a great deal of helpful material.

The work of this Commission is an important — perhaps the most important — result of our desire to have the Department of Superintendence render "year-round" service to its members. Chairman Norton and his associates are doing a great job and we are very grateful to them.

Yours faithfully,  
PAUL C. STETSON,  
President

June 1, 1933

## REDUCING Electricity Costs in Schools

**H. H. Linn, Business Manager, Public Schools, Muskegon, Michigan**

(Concluded from June)

### Reducing Electric Rates

Since the amount of electric bills depends on the rates charged for energy consumed, efforts should be made to secure the lowest possible rates for the schools. While many schools now receive the benefit of the lowest rates to which they are entitled, there are many places where further adjustments in the rate structure may be made to the advantage of taxpayers. The following suggestions are offered to indicate the possibilities of securing lower rates:

A. As a general rule, the electric rates for power and heating appliances are lower than the rates charged for lighting purposes. There-

fore, separate motors should be provided to measure the consumption of electricity at the different rates, where this arrangement results in a saving for the schools.

When separate motors are provided, the lines and connections should be checked to make sure that the hook-up is proper. The school officials of a large southern city informed the writer that the power lines in one of their high-school buildings had been connected with the light meter by mistake, so that over a period of several years, the schools had paid out more than \$5,000 in excess of the actual charge. After the error was discovered, an adjustment

was made so that the schools recovered a part of this loss.

B. In some places where the rates are placed on a sliding scale, based on consumption, there is a possibility that meters may be consolidated so that lower-rate schedules may be reduced. It is possible that the power companies may be persuaded to consider readings from several different meters as coming from a single point, thus effecting a saving for the schools.

C. If the connected electrical load is used as the basis for making charges, lower rates may be secured if the connected load is reduced. This may be done in several ways as follows:

1. The size of lamps may be reduced.
2. The number of lamps may be reduced by removing them from attics, tunnels, and other areas that are rarely used. In some cases, a number of lamps may be taken out of the stage footlights and border lights, as these add sharply to the connected load.

3. Arrangements may be made with the power companies to cancel certain motors during seasons of the year when they are not in use. This applies especially to motors connected with the ventilating or heating systems.

4. Arrangements may be made with the power companies to cancel some of the duplicate motors. For example, if the heating plant consists of two boilers, each equipped with an electric stoker, but only one boiler used at one time, only one motor should be considered as being hooked up in determining the connected load.

5. Motors that are not used should be cut off from the line so that they will not be considered a part of the load.

D. In many places, different electric rates are established to meet varying conditions. School officials should become acquainted with the different schedules and should accept those that offer the greatest savings. For example, one power rate may charge 5 cents per kw. hr. (kilowatt hour) for all electricity consumed by a motor, while another rate makes a base charge of \$20 annually per h.p. (horse power) load, with an additional 2 cents per kw. hr. consumed. In this case, if the motor runs a great part of the time, the second rate may be cheaper than the first rate. If the motor is used only part time, the first rate may be the more economical.

E. If the rates are based on a demand curve as measured by a demand meter, savings may be effected by regulating the plant needs so that peak-demand loads are lowered.

F. It may be possible in some cases to secure lower rates by applying to the power companies for reductions. If it appears that a reduction is justified and the power companies do not meet the demands, further relief may be sought from the State Utilities Commission. A study of the development and growth of some public utilities, with their intricate organization and interrelated companies, leads one to suspect that in some instances the consumers have been compelled to pay excessive and unfair rates for the benefit of the utility-company officials and stock holders.

### School-Owned Power Plants

Under certain conditions, a school-owned power plant may prove an economical investment, especially if the school uses a large amount of electricity at a single point, and if the rate charged by the utility company is rather high.<sup>4</sup> Several schools in Grand Rapids, Michigan, are equipped with power plants which, according to William W. Bradfield, engineer for the board of education, generate power at approximately one half the cost per kw. hr. charged by the local power company.

<sup>4</sup>A more detailed discussion of this subject may be found in Linn, H. H., "Reducing Electricity Costs for Public Schools," *The American School and University*, 1931-32, pp. 173-5.

(Concluded on Page 60)

# The Economic Crisis and State-Supported Education

H. A. Ferrin, Superintendent of Schools, Joliet, Illinois

Even the casual observer is aware that schools throughout the nation are reported as having the greatest difficulty in maintaining standards comparable with those of three or four years ago.

The administrators of schools and members of boards of education are keenly aware of the many difficulties faced by the schools during the past few years. The general social-economic breakdown has produced situations in many sections of our country which have resulted in the serious curtailment of financial school support.

Concurrent with necessary curtailment in school expenditures, there has been an ever-increasing stream of pupils seeking admission to the schools. The problem resolves itself into not only curtailing costs of maintaining schools but of caring for the increased number of pupils.

State-supported schools have been advocated as superior to purely local, or combined local and state-supported schools. The value of this contention may be ascertained from the angle of financial support by considering the school systems of such states as Delaware and North Carolina. Both of these states have been referred to in lectures, books, and magazine articles—to say nothing of educational studies—as approaching the perfect method of school support. A consideration of present conditions in these states may be enlightening.

## The Delaware Plan<sup>1</sup>

Inquiry among the state school officials of Delaware has brought information that the state salary scale for teachers has not been reduced, but districts have been requested to curtail expenditures and to return unspent funds to the state school fund, that sick leave for teachers has been abolished, and that salaries of janitors have been reduced.

Two things are evident from the foregoing report. First, the request for strict economy is definite proof that the economic distress of the times is being felt to some extent. Second, the fact that teachers' salaries have not been cut, according to state scale, is indicative of the power of such a state plan to maintain essential standards long after many other schools have found it necessary to curtail the salaries of teachers by 10 to 30 per cent.

What method of school financing is used by Delaware? The answer to this question may reveal the particular points of strength in a plan which maintains standards for schools so well in these turbulent times.

The public schools of Delaware are operated as a state unit under the direction of the state board of education and the state superintendent of public instruction. There is provision for the city of Wilmington and thirteen other relatively independent city districts known as special districts.

Support of schools is placed on a state basis. Equalization is thus secured throughout the state. There is a provision, however, that each district may, upon local popular-vote approval, levy a local tax to supplement expenditures on a state basis. It is significant to notice that, except Wilmington, until recently no district found it necessary to levy such a local tax. At present three of the thirteen special districts are making small local levies.

## Sources of Delaware Funds

The funds for state school support are provided through legislative appropriation. The amount appropriated was increased from \$3,

250,000 for 1930-31, to \$3,612,000 for 1932-33. Such appropriations made by the legislature are from funds, the sources of which are "earmarked" for schools. The sources of school funds are three in number: (1) personal income tax, (2) franchise tax, and (3) income derived from the state school fund. Legislative appropriations are limited to income from the foregoing sources.

Within the limits of the appropriation, the state treasurer pays out school money, advancing sums from general funds in case of deficiency in school revenues received to date.

The basis of disbursing school support is the net pupil enrollment. For pupils in grades seven to nine an allotment of \$82.50 per pupil is made; and for pupils in grades ten to twelve, an allotment of \$90 is made. After making deductions for the foregoing classes, the remainder of the appropriation is prorated according to the net pupil enrollment in grades one to six. The per pupil distribution for these grades was \$68.02(5) for 1931-32 and \$65.66 (2) for 1932-33.

It is interesting to notice that the use of the budget system in Delaware is limited wholly to determining the total amount of school appropriation to be asked of the general assembly. Distribution entirely disregards budget findings, using the net pupil-enrollment method as previously stated.

Although it is the purpose of this article to set forth conditions as they actually exist, one cannot avoid pointing out the great opportunity which the approved budgets offer, should the state choose to support schools according to such predetermined needs rather than to digress to the extent of using the net-enrollment-distribution method. Surely the science of school support lies in the full budget method, even though certain or all budget items may have to be scaled to state standards in terms of the appropriation.

Despite the deviation from full budget practice, the Delaware plan furnishes an example of the operation of a state-supported school system which seems to be weathering the present economic depression.

## The North Carolina Method<sup>2</sup>

The public schools of North Carolina are operated under a plan approaching closely that of full state support according to state standards.

The state superintendent of public instruction is a publicly elected state officer. There is an ex officio state board of education, functioning nominally and consisting of state officers, governor, lieutenant governor, secretary of state, treasurer, attorney general, and auditor. The state board of equalization exercises important powers with reference to all fiscal school matters. The county board of education, which has direct charge of schools of the county, initiates and directs expenditures, subject to approval of the budget by the state board of equalization. District school trustees function in setting up levies for additional expenses, in excess of the state standard costs, for those districts voting favorably for higher standards than those supported by the state program.

The constitutional public school of North Carolina is fully state-supported, according to state standards. This constitutional school, however, is limited to a six months' term. There is provision for an extended eight months' school which is dually supported by the state

and the school districts electing to maintain the extended term.

The six months' term is financed by state funds appropriated by the legislature. This appropriation for 1931-32 and 1932-33 was \$16,500,000 for each year. The source of state funds are: (a) inheritance tax, (b) license fees, (c) franchise tax, (d) income tax, and (e) a 15-cent property tax.

The state support of the six months' term is allotted through budgets, submitted by the county boards of education, and approved by the state superintendent in accordance with state schedules. The budgets of special charter districts are submitted to the county board and become a part of the county budget. This plan equalizes the support of all six months' schools up to the state standard. However, with the approval of the board of county commissioners and the state board of education, the county board may levy local taxes to support schools of higher standard than that provided by the state. Furthermore, under similar approval, each district may increase any item or items. This is true for both the regular and the extended terms.

## The Additional Term

The extended term for any district school provides for an additional two months, thus furnishing an eight months' school. Under the original law, equalized local district laws provided support for the extended term, when such taxes were authorized by local popular vote. Although the state support of schools is limited by the constitution of the state to the support of the six months' school, the legislature provided a tax reduction fund of \$1,500,000 to reduce the local tax for the support of the extended two months of school. The foregoing sum is disbursed upon the basis of (1) ability to pay and (2) adjustment so that the cost according to state standards is borne about one half by the state and one half by the district.

The method of providing a uniform tax rate for each district in the state conducting an extended-term school is unique. The state board of equalization determines the value of all taxable property in each and all school districts maintaining the additional two months of school. The board further determines the cost of operating the extended term in each and all of the districts. The amount of the state appropriation for tax reduction is deducted, and the remainder is the net amount to be raised by taxation in all of the districts with extended terms. The uniform rate to be levied is then determined and certified to the tax-levying authorities in each county maintaining extended-term schools. The difference between the yield per district and the predetermined cost is the amount any given extended-term district is entitled to receive from the state tax-reduction fund, but the costs of the extended term in any district shall not exceed the pro rata costs of the six months' constitutional term.

The number of teachers allowed state salary costs shall not be in excess of 1 teacher to 35 pupils in average daily attendance in elementary schools during the previous year, and 1 teacher for 25 pupils in high schools. A definite schedule is provided to meet conditions varying from a one-teacher school to a multiple-teacher school. The state board of equalization may allow one or more additional teachers in any county when, in the opinion of the board, the county, on account of natural barriers of inaccessible roads or other legitimate reasons, has been unable to complete its reorganization of schools. The board may withhold funds from

<sup>1</sup>Details read and checked by H. V. Holloway, State Superintendent of Public Instruction, Dover, Delaware.

<sup>2</sup>Read and details checked by A. T. Allen, State Superintendent of Public Instruction, Raleigh, N. C.

any school or schools which should be consolidated. Furthermore, quite extensive powers of adjustment and adaptation are granted the state board of equalization.

Transportation of pupils is included in school costs. The state board, which really means the state superintendent of public instruction, is directed to make state-wide studies of transportation needs and practices, to formulate rules and regulations which will lead to economic, efficient, and safe transportation of pupils. The flexibility of powers granted to the state board is further illustrated by this legislative act.

#### Success of the Plan

The North Carolina method has been effective in supporting the six months' school term during the biennium, 1931-32 and 1932-33. This is no doubt due, in part, to the fact that the plan was inaugurated by the 1931 legis-

difficulty many times over by the way and manner in which the extended term is organized, financed, and operated. Under this plan, in making its budget every district must make an allowance for a little balance which makes it necessary to levy on the whole a greater amount of taxes than would be necessary if all the funds were thrown into one lump sum.<sup>14</sup>

In discussing the plan further, he writes: "Instead of providing a uniform system on such a basis, we came out with a spotted system—six, seven, eight, nine months—depending upon the attitude and ability of the community in which the child lives. . . . I am convinced that the adequacy of our schools in the future is largely dependent upon a perpetual divorce from the entangling alliances which we have come through, a divorce which we now enjoy so far as the six months' school term on state's standards of cost is concerned."<sup>15</sup>

can be modified so as to maintain equivalent educational conditions in all parts of the state. On the other hand, time alone will tell whether the very existence of such possibilities will result in superior or inferior school conditions as a whole.

#### Principles of State School Support

It will be recalled that Delaware uses the district (county) budget plan of arriving at the amount which the state board requests from legislative appropriation, but that she distributes the funds on a school-census basis. North Carolina provides for full state support of the six months' term with a separate plan for a longer term. Thus, it appears that there is little in common between the plans of school support for the two states, other than the attempt to place the responsibility for maintaining the public schools squarely on the state,



CRACKING THE WHIP—By Homer Winslow

A characteristic bit of American rural life in the middle of the nineteenth century is preserved in this fine painting by one of America's greatest artists. The little red schoolhouse with its back to the green of the hillside, the hearty play of the barefoot boys, the more sedate groups of girls in the middle distance, all tell a story of simple life and simple education that has given way to a completer and better organized rural education. The picture is reproduced by courtesy of the Youngstown, Ohio, Art Museum.

lature at a time when the difficulties of the depression were clearly discernible. It should be clearly understood that many rather radical provisions were included in the initial financial aspects of the plan. For example, the new salary schedule for county superintendents was a reduction in most instances; high-school principals were generally eliminated by raising the number of teachers for a full-time principal from 20 to 50; similarly, the number of allotted teachers to one principal in a school system was raised from 20 to 40; salaries of teachers were reduced where average daily attendance was slightly lower than the state standard; the state board was empowered to reduce all salaries by a flat percentage, not to exceed 10 per cent; and teachers' salary increments were eliminated.<sup>16</sup>

However serious the foregoing limitations, the fact remains that the plan for state support of the six months' term has functioned uniformly in the past two turbulent years. Not so much can be said for the operation of the plan of supporting the two months' extended term. Indeed, the state superintendent in commenting on the situation writes: "The administration of the total school system, especially with respect to the extended term, is increased in

In commenting further upon the plan and its results, the state superintendent says: "It is pretty generally agreed among people who have given it attention that a six months' term is not sufficient to meet the educational needs of the children of the state in a civilization such as we are trying to build."<sup>16</sup>

Convincingly, the consolidated eight months' term is proposed and factually supported as the needed legal provision for future state-supported schools. When the support for this eight months' term is placed upon a state basis, as opposed to the present local basis for two months, North Carolina will be well out in front as a leader in the support of its public-school program.

#### State Support and Equal Minimum Opportunities

The idea of state support for a minimum-standard school program is generally accepted as the best method of insuring equal opportunities to the school-age generation. From the foregoing facts it appears that in Delaware and North Carolina the basic plan has succeeded under such difficult conditions as the past few years have presented.

Perhaps one of the factors of greatest significance in the method employed lies in the flexibility with which uniform state standards

which, of course, is a fundamental factor.

Perhaps the methods of disbursing state funds for the support of schools will continue to go through various stages of experimentation, but it may be pertinent to the present consideration to point out that the principle of school support now in general favor is the allotment of a set guaranteed amount for each teaching unit.

Although neither of the support plans illustrated in this presentation may be said to include this principle, yet the North Carolina method for the six months' term approaches it closely through its budget-support idea. Indeed, the budget-support idea ranks very high. It would seem also, that Delaware has the necessary organization to pay according to budgets, rather than to revert to some census plan, for actual disbursement of funds after they have been ascertained by the budget method.

Neither plan illustrates the newer principle so pointedly as the plans for state school support in New York, Utah, and Missouri, but both Delaware and North Carolina utilize plans which place the support of public schools squarely upon the state and are, therefore, of extreme importance in any consideration of plans that withstand unusual economic difficulties, without breaking down the maintenance of schools in any part of the state.

<sup>14</sup>Biennial Report of the Superintendent of Public Instruction of North Carolina for the Scholastic Years 1930-31 and 1931-32, Part I, Summary and Recommendations, State Superintendent of Public Instruction, Raleigh, North Carolina.

<sup>15</sup>Ibid., p. 14.

<sup>16</sup>Ibid., p. 15.

<sup>17</sup>Op. cit., p. 15.

# PROMOTION of Pupils in Elementary Schools—I

Henry J. Otto, Northwestern University

In spite of the large amount of educational research which has been done, the question of pupil promotion remains in a relatively chaotic, confused, and unsolved condition. One needs but to scan any one of a number of recent investigations to become convinced of the fact that there are today in American elementary schools no generally accepted policies or practices regarding the promotion of pupils.<sup>1</sup> The beliefs of administrators regarding the policies which should govern pupil promotion range from rigid application in each grade of high subject-matter standards of achievement to 100-per-cent promotion and the thought that failure and nonpromotion for any child in any grade are tragic experiences and should not be tolerated. The criteria on the basis of which it is decided whether a pupil shall or shall not be promoted to the next higher grade at the end of the semester or year vary from subjective ratings of deportment and effort to objective measures of academic achievements and mental abilities. In one of the recent studies referred to above, 17 different criteria or bases for promotion were reported. These measures are applied, singly or in combination, in 122 different arrangements. If the relative weights given to each of the measures differs materially from school to school, the number of different promotion plans actually in operation might well be approximated in the neighborhood of 200. This situation prevails in spite of the fact that there is probably no single aspect of the organization of graded elementary schools which continuously confronts teachers and administrators in a more baffling manner than that of promotions; and, in spite of the fact that each school system is struggling with the problem and attempting to find the best possible solution. It is the purpose of this article to analyze various aspects of the promotion problem and to make certain recommendations.

## Complexity of the Promotional Problem

The whole problem of promotion is extremely complex and has intimate relationships with so many phases of the organization and the administration of the school that it is difficult to discuss it apart from its related setting. It is likewise difficult to isolate for discussion any particular aspect of promotion. The promotional practices of a given school are inextricably associated with the plans followed in the classification of pupils, the organization, content, and method of administration of the course of study, the size of classes, the instructional load of teachers, the organization of the program for instruction, methods of teaching, the types and amounts of remedial teaching that can be given, as well as other items that might be named.

A concrete example may illustrate further the complexity of the problem under consideration. Whether a fourth-grade child shall be promoted to grade five or retained in grade four will depend, not only upon the level of his own educational development, but also upon the general academic status of the other members of his class or other classes with whom he would become associated. If ability grouping and differentiated curricula prevail in the school the question of promotion assumes new angles. Perhaps the child would be better adjusted if shifted to a group of lower ability or of higher ability, as the case may be. Perhaps the fourth-grade teacher may wish to consider such factors

as the age and maturity of the child as compared to the general age status of the children in the various grades, the number of teachers to which the child will be responsible if the instructional program is departmentalized, and the extent to which the teaching procedures of the receiving teacher provide for individual differences and remedial instruction. Of the many factors that the teacher might consider, the ones that are likely to bear the largest influence in forming her decision regarding the disposition of the particular case are the ones which relate to the administrative policies and practices in the school, many of which would not be thought of as being intimately related to the question of promotion. It is hoped that these relationships may be brought out more fully in the subsequent discussion. Even though the problem of promotion has been isolated here for special treatment, the reader should bear in mind that in actual practice it cannot be separated easily from other aspects of organization and administration with which it is intimately associated.

## Current Promotion Practices

Aside from the relationships which promotional policies have to other aspects of administration, the question of promotion itself has many integral phases. Among these are the time interval between promotion periods, the bases for promotion, promotion standards, trial promotions, the purposes and values of failure, and reports to parents. Each of these, and perhaps certain others, are taken into consideration by nearly all public schools in the formulation of their policies and in the application of current promotional practices. For clarity of discussion and analysis, each of these phases of the promotion problem has been selected for separate treatment, followed by a generalized, coordinating summary statement.

## Promotion Periods

For nearly a quarter of a century after the grading of elementary schools in the United States took place, the pupils were promoted but once each year. This meant that a pupil completed a grade each year unless he failed to do satisfactory work, in which case he was required to repeat the work of a whole year.<sup>2</sup> The rigid standards and formalized procedures which accompanied the development of the graded school with its annual promotions soon created much dissatisfaction and various attempts were made to correct the evils in the then existing graded system. The early attempts at reorganization were characterized chiefly by changes in the length of time between promotion periods. St. Louis, under the leadership of W. T. Harris, began a quarterly (at 10-week intervals) promotion plan as early as 1862, although it was not adopted on a city-wide basis until 1872. Other cities shifted to a semiannual plan in which promotions are made in the middle and at the end of a 9- or 10-month school year. Each grade is usually divided into two sections, B to designate the first half of the grade, and A the second, or advanced half.

At the present time, with reference to promotion periods, school systems may be classified roughly into two groups; namely, those which have annual promotions and those which promote semiannually. Semiannual promotions prevail in nearly 80 per cent of the cities with a

population of 30,000 or more, while the smaller cities prefer the annual plan. Data gathered by the Department of Superintendence in 1931 from 555 school systems show that within the preceding ten years 51 cities had changed from the semiannual to the annual promotion plan, and that 68 had changed from the annual to the semiannual.<sup>3</sup> At the time of the study there were 41 school systems contemplating a change in promotion plan; 26, or 63 per cent, of them were planning to change from the semiannual to the annual, 10, or 25 per cent, from the annual to the semiannual, while 5 systems, or 12 per cent, were planning to promote pupils at any time during the year—3 of the latter 5 seemed in favor of quarterly promotions.

The above data seem to suggest an uncertain status regarding promotion periods and a lack of agreement as to the most desirable plan to adopt if a change is contemplated. The Committee on Articulation of the Department of Superintendence gathered statements from 555 superintendents of schools regarding the advantages and disadvantages of the promotion plans then operative in their schools. The interested reader will profit from a critical analysis of the arguments pro and con, which have been recorded for the two major promotion periods prevailing in public schools today. A careful comparison will show that for every advantage of the semiannual plan there is at least one corresponding item which has been listed as a disadvantage of the annual plan; and for every disadvantage of the semiannual plan there is at least one corresponding item recorded as an advantage of annual promotions. So far as arguments are concerned, the contest seems to end in a draw. The statements recorded above are the opinions of practical school administrators and should be given due consideration as the reactions and the experiences of persons who are endeavoring to solve in a practical school situation a difficult problem which is confronting them, but one must remember that research in this field has been limited and that there is practically no scientific evidence to prove the superiority of one promotion period as compared to another. Nearly all of the items in each of the four lists referred to above relate to administrative convenience; only a few of them pertain to pupil growth.

Perhaps it would be desirable to forget about the intimate relationship between promotion practice and pupil progress and to think in terms of pupil growth, pupil needs, and pupil abilities. It is extremely difficult, if not impossible, to fit the educational growth of children into calendar periods which correspond to the annual or semiannual promotion periods. Even though standards of achievement have been well formulated for the completion of each grade or half grade, there will be large numbers of children whose level of development regarding a particular phase of the curriculum will not reach the desired goal at promotion time. Certain groups of children will have exceeded the accepted standards before the end of the semester or year is reached while other pupils reach the desired stage after the promotion period has passed. The latter group would be doomed to repeat the grade if promotion standards were applied rigidly and the work of pupils could be evaluated accurately. Neither of these two things prevail in schools at present. It would seem wiser to abandon the notion that the end of the semester or year represents promotion time and to simply consider the completion of a calendar period as a

<sup>1</sup>Ninth Yearbook, Department of Superintendence (1931), pp. 17-78. Henry J. Otto, *Current Practices in the Organization of Elementary Schools*, Northwestern University Contributions to Education, School of Education Series, No. 5 (1932), Chap. VI. Henry J. Otto, "Administrative Control of Pupil Promotion in Elementary Schools," *Educational Trends*, II (January, 1933), pp. 28-33.

<sup>2</sup>"One method of administration places the several grades, as it were, in a series of rooms adjoining, but separated by a wall in which is a closed door. Once a year the door is opened for the passage of those who are provided with cards bearing the requisite percentage mark, and then closed for another year." J. L. Pickard, *School Supervision* (D. Appleton and Co., 1890), p. 91.

<sup>3</sup>"Five Unifying Factors in American Education," Ninth Yearbook, Department of Superintendence (1931), p. 65.

reorganization period for the reassignment of pupils to classrooms and teachers. Pupil progress would be considered as continuous and would be measured and expressed in units which would indicate the educational growth of children. The stage of pupil development would have little if any relationship to the periodic reorganization of the school. Especially would this be true if pupils were classified on the basis of social maturity. The reorganization periods would then be determined on the basis of administrative convenience.

#### The Bases for Promotion

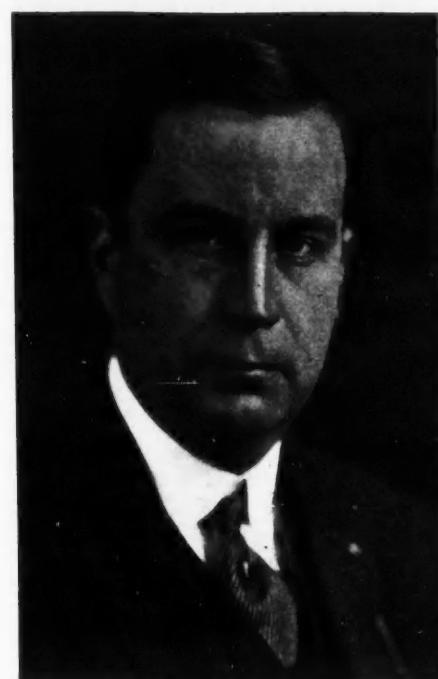
Although the time interval between promotion periods is important from the viewpoint of the principal who is endeavoring to formulate policies and plans for the administration of pupil progress, the most vital phase of any promotion plan consists of the selection and application of the criteria on the basis of which promotion and failure are decided. Promotions may be based solely on teachers' marks in each of two schools which promote semiannually, but in one school teachers' marks are determined rather carefully by a comparison of pupil achievement with comprehensively stipulated statements of academic standards for the end of each half grade while in the other school there is no printed course of study and no list of achievement goals for the various half grades. Teachers' marks in the latter case may represent the teachers' best judgments, based on experience but not on specific, discernible elements. It is not likely that the promotional plans in these two schools will be alike, except in outward, superficial ways. If a combination of several measures were used in each school, but applied in a different fashion, the promotion plans might be still more unlike.

A recent study showed that the measures which are applied when pupils are promoted from one grade to another differ materially in the school systems of the country.<sup>4</sup> A total of 17 different measures or bases was reported. These measures are applied, singly or in combination, in 122 different arrangements. Although about one fourth of the 307 school systems represented permit the promotion of pupils to be determined entirely on the basis of one measure, the large majority of systems prefer a combination of several measures. No one combination of criteria, however, particularly outranks any of the others in the number of times it was reported. No one measure or combination of measures was reported by more than 17 school systems. A summary of the total number of times each measure was reported shows that the teacher's mark plus the teacher's estimate of industry and initiative was posited most frequently.

No endeavor was made in the above study to ascertain the relative weights given to each of the various measures used in selecting pupils for promotion. It is likely that the relative importance assigned to the different bases differs from city to city, or from school to school within the same city, depending upon administrative policies and the individual pupils under consideration.<sup>5</sup> The general lack of agreement regarding desirable criteria which shall form the bases for promotion presents a discouraging chaos.

#### Promotion in the Primary School

Some readers may feel that the question of promotion is general for the entire period of elementary education and therefore should not be divided into separate treatments for the primary and the intermediate levels. Such dichotomy may lead some to assume that the



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Dr. George F. Zook, of Akron, Ohio, recently appointed by President Roosevelt as Commissioner of Education, to succeed Dr. William John Cooper, is a native of Kansas and was educated in the University of Kansas and Cornell University. Following his graduation in 1914, he became an instructor in the Pennsylvania State College. He remained there until 1920, when he was appointed chief of the division of higher education in the United States Office of Education. In 1925, Dr. Zook resigned to become president of the University of Akron at Akron, Ohio.

Dr. Zook will take over his new duties on July 10.

elementary school should be thought of as consisting of two distinct units. Whether such division is undesirable is not certain. But in any event it seems that there are some problems of promotion in the primary grades which merit special consideration.

Several factors relating to promotion in the first grade were discussed by the writer in another article.<sup>6</sup> For the sake of the continuity of the present discussion, the main features of the previous article may be repeated. Investigations pertaining to pupil failures in school have shown consistently that the largest percentage of failure occurs in the first grade and that reading is the subject of greatest difficulty.<sup>7</sup> Other scientific evidence which has been gathered points to the conclusion that children cannot profit materially from instruction in reading until they have reached a mental age of 6 years and preferably 6 years and 6 months.<sup>8</sup> Yet we expect teachers to teach reading to *all* children upon their entrance into grade one. Most schools admit children to grade one at a chronological age of 6 years, and since the median mental age of 6-year-old children is 6 years there will be found in every first grade large numbers of children whose mental ages are less than the 6 years or 6 years and 6 months desired for the successful learning of reading. It is obvious then that the requirements of the first-grade curriculum are too difficult for large numbers of children who enroll in grade one.

The absurd situation described above might not be so fatal to first-grade children if the bases for promotion did not undergo a sudden shift as the child passes from the kindergarten to grade one. Among the bases for promotion from kindergarten to first grade, as reported by 505

<sup>4</sup>H. J. Otto, "Implications for Administration and Teaching Growing Out of Pupil Failures in the First Grade," *Elementary School Journal*, XXXIII (September, 1932), pp. 25-32.

<sup>5</sup>(a) A. O. Heck, *Administration of Pupil Personnel*, pp. 352-384 (Ginn and Co., 1929). (b) "Five Unifying Factors in American Education," *op. cit.*, p. 53.

<sup>6</sup>(a) Mabel Vogel Morphett and Carleton Washburn, "When Should Children Begin to Read?" *Elementary School Journal*, XXXI (March, 1931), pp. 496-503. (b) Erby Chester Deputy, *Predicting First-Grade Reading Achievement: A Study in Reading Readiness*. Teachers College Contributions to Education, No. 426 (New York: Teachers College, Columbia University, 1930). (c) W. W. Theisen, "Does Intelligence Tell in First-Grade Reading?" *Elementary School Journal*, XXII (March, 1922), pp. 530-34.

superintendents of schools, chronological age heads the list.<sup>9</sup> In grade one, however, the scene changes and reading ability becomes the chief basis for promotion. Since the same standards of reading achievement are usually applied to all children, irrespective of mental ability, a large percentage of failure in first grade is inevitable. Present methods of school administration make it impossible for anything to happen in first grade other than a large percentage of failure.<sup>10</sup> The one cause of failure most frequently mentioned is "inadequate mental ability." Apparently school administrators and teachers believe that inability on the part of the child to cope with the academic tasks prescribed by the school is cause for failure. If the contention that it is the business of the school to adapt materials and methods to the needs and abilities of individual pupils is accepted, it is difficult to see how inadequate mental ability can be a cause for failure. It would seem that any school system which seeks to justify pupil failure on the basis of the inadequate mental ability of pupils is begging the question and is admitting openly that the school through its organization, curriculum prescriptions, teaching procedures, and administrative policies is not meeting the challenge of the best modern educational procedure. Obviously, many factors other than lack of mental capacity are operative and may perhaps justify nonpromotion. However, it would seem that, if the best diagnostic and remedial measures available are applied according to the needs of individual pupils, there will be relatively few pupils who will not achieve to the best of their ability, and hence there will be little cause for failure. The general conclusion to be drawn from the above paragraphs is that the high rate of mortality in the first grade should be ascribed to but one cause: namely, unusually *unintelligent practices* in school administration.

As a means of avoiding the financial losses incurred and the personal losses to the pupil by nonpromotion, several proposals have been made. Among these is the suggestion for a revision of the bases upon which pupils are admitted to the first grade. If capacity to do schoolwork as manifested by mental age should become the criterion for admission to the first grade, a much larger proportion of pupil success than now prevails would be assured. If the grade placement of curriculum content for the first grade is to be considered so thoroughly and scientifically established that its present most commonly found status cannot be altered, then entrance on the basis of mental age is, no doubt, to be preferred. Under those conditions school systems which provide no kindergartens will find a large proportion of children (those of less than normal intelligence) who will be seven, eight, and nine years of age before they can enter the public schools. Even cities which operate kindergartens for all pupils of requisite age find difficulty in retaining the pupils of less than normal intelligence in this introductory unit until they have attained a mental age adequate to cope with the school prescriptions for the first grade.

A plan which is perhaps more feasible and more in harmony with the purposes of public education is to admit to the first grade all pupils who are chronologically six or approximately six years of age and then to provide teaching procedures and a type of classroom organization adapted to the educational needs of the pupils.<sup>11</sup> After all, one of the major functions of a primary school is to provide a wholesome environment in which children may grow up. The quantity of academic skills acquired during the elementary-

<sup>9</sup>Ninth Yearbook, pp. 43-47.

<sup>10</sup>Ibid., pp. 52-55.

<sup>11</sup>One proposal for classifying first-grade pupils for instruction in reading will be found in the *Report of the National Committee on Reading*, pp. 30-35. Twenty-fourth Yearbook of the National Society for the Study of Education, Part I (Bloomington, Illinois: Public School Publishing Co., 1925).

school career and the exact time at which they are acquired is of secondary importance for many pupils, but it is of primary importance that every child be surrounded with, and have an opportunity to develop in, an environment in which right attitudes and ideals may develop. A school cannot make its full contribution to the development of a good man and a good citizen if a pupil is denied admission until the mental age is adequate to cope with the tasks prescribed by the course of study nor if failure — to say nothing of successive failures — seems to be the pupil's lot. Hence, it seems that the only defensible policy is to admit on the basis of chronological age and to provide such flexibility in organization, curriculum, and teaching procedures that the educational needs of various types of first-grade pupils will be cared for adequately.<sup>12</sup>

Some administrators have met the problem raised by immature kindergarten as well as immature nonkindergarten children who have reached a chronological age which would warrant admission to first grade, by organizing "connecting classes" or "junior first grades" for pupils not ready for first-grade work. This would seem superfluous if designed to reduce the failure of slow children. Children who have low intelligence quotients upon entrance to first grade are fairly certain to retain them throughout their whole school experience. The problem seems to demand a curriculum for these children which will comprehend their whole school experience and thus eliminate failure and its resulting discouragement.<sup>13</sup> Such children are more prone to leave school at an early age, and an extra year or half year in a "junior first grade" may deny the child that amount of time in the enriching experience of the junior high school.

A problem, somewhat similar to the above one, arises at the end of Grade IB in schools in which large proportions of children who are immature, unready for reading, or transients, enter late and are enrolled in the beginning first grade. Usually these students become failures and thus tend to create unusually high percentages of failure for Grade IB. Teachers feel that this is an unjust indictment against the work of the first grade. In some schools "connecting classes" called "Reading Preparatory Groups" have been organized at this point and to them are assigned all pupils who are judged unready for the work of Grade IA. If the majority of pupils assigned to such groups have low mental abilities, and if the ultimate result is the addition of one-half year to the time spent in the elementary school, then the attitude regarding the establishment of such groups should be the same as that regarding the "junior first grade."

Marked changes in curriculum content may be noted for most schools as children pass from the third to the fourth grade. New subjects are found in the course of study. Learning and school activity in general proceed on a higher plane. The interests of children are broadening and their powers are extending. Pupils are launching out into the study of a variety of subjects and the school is endeavoring to provide for children wide, rich, and varied experiences in many fields of interest. Reading skills, habits, and abilities definitely become the tools of learning rather than constituting the chief aims of reading instruction. Many factors suggest that children should have acquired the fundamental reading habits and skills before they enter upon the program of the intermediate grades. Hence some schools have established administrative policies which tend to retain children in the third grade until an adequate foundation in reading has been built. Frequently these policies are applied without reference to

the age and maturity of the pupil. In spite of some merits which a plan of this kind may have, it would seem unwise to establish unusual hurdles or a final "catch-all" barrier at the end of the third grade, which would tend to retard pupil progress and tend to accumulate retardation at a particular point. It would seem that a better plan is to permit all children to enter Grade IV and to provide for the poor readers the necessary adaptations and remedial instruction. Teachers at times will need to be ready to provide for the individual differences of pupils and it is unlikely that rigidly applied promotion standards at the completion of Grade III will reduce materially the need for differentiated instruction.

#### Promotion in the Intermediate Grades

In grades four, five, and six, promotion problems assume a character somewhat different from that in the primary school. The broader curriculum, the introduction of new subjects, brings into sharp relief new factors in the determination of pupil progress. Promotion is more frequently determined on the basis of the proportion of the total number of subjects or the total number of academic subjects in which the pupil receives passing grades. Administrative policies in some schools hold that a pupil shall be retained in the grade if he fails to receive passing marks in more than two of the so-called "solids" or academic subjects, or in more than one of the "solids" and one or more of the "special" subjects. Reports from 555 superintendents of schools indicate that the subjects in grades four through six in which the largest number of failures occur are, in order of frequency of mention, as follows: arithmetic, language or English, geography, reading, and history or social studies.<sup>14</sup> Next to the largest number of pupils fail, according to the number of cities reporting, in arithmetic, reading, language, geography, and social studies. No doubt the reason the largest number of students fail in one subject in one city while in another city the largest number fail in another subject is due to the varying importance and emphasis attached to the same subject.

Much additional data could be assembled from professional literature to demonstrate the large variety of promotional policies and practices which exists in present public-school practice. Teachers and administrators in each school system have struggled with the problem and have devised plans and procedures which they believe to be improvements over the previously used methods. In most instances the newly adopted plans correct certain recognized evils or disadvantages, but at the same time the new plans almost always carry some unavoidably undesirable features. The ideal promotion plan has not yet been devised, and it is very doubtful whether it ever will be, so long as pupil progress from grade to grade is to be determined on the basis of academic standards of achievement in terms of which the work of pupils must be evaluated.

A crucial point in pupil progress is frequently found at the end of the sixth grade. Junior high

schools are commonly organized as separate units, at least apart from the elementary schools, and each junior high school receives pupils from several contiguous elementary schools. Articulation between the elementary school and the introductory unit in secondary education is not always at its best. Children from different elementary schools bring to the junior high school varying backgrounds of general and academic experiences because the educational opportunities, abilities of children, and standards of achievement may differ from one elementary school to another. Junior high schools in general are not yet ready or always entirely willing, for a variety of reasons, to provide adequately for the varying interests and abilities of children who enroll. The fact that in the majority of school systems promotion from the sixth grade to the seventh grade, in practice if not in theory,<sup>15</sup> is based upon the acquisition of minimum essentials of subject matter as outlined in courses of study and as evaluated by teacher judgment or the use of standardized tests may lead junior-high-school teachers to anticipate a certain uniformity in the achievement of the children who come to them. Another factor which may contribute to the above expectation of junior-high-school teachers is the fact that in nearly one third (31 per cent) of 555 school systems the elementary school is looked upon as an institution which takes children of varying physical and intellectual capacities who are approximately six years of age and requires them to reach certain minimum standards of educational accomplishments before they are promoted to the junior high school<sup>16</sup> and that in one fourth of these school systems the superintendents believe that the junior high school shall admit only those pupils who have successfully achieved certain minimum accomplishments in the elementary school, even though this may require, in many cases, that seven, eight, or even more years be spent in the elementary school.<sup>17</sup> Such administrative policies result in much retardation in the intermediate grades, particularly in the sixth grade, and deny to many of the less able students the experiences of the junior high school.

It is apparent that policies and practices regarding promotion from the elementary school to the junior high school differ materially in the school systems of the nation. Part of the cause for the heterogeneity of practice may be the fact that the elementary school which concludes with the sixth grade is a comparatively new type of unit in the program for public education and thus has not thoroughly "found" itself. Another factor may be the complete assignment to the elementary school, in some quarters, of the objective which deals with the acquisition of fundamental knowledges, habits, and skills. In view of the disagreements which exist, the practical administrator will be casting about for a solution to this most difficult problem. To avoid denying to a large group of children, through elimination, the enriching and broadening experiences of the junior high school, it is recommended here that *all* children, regardless of ability or academic achievements, be admitted to the junior high school after having spent seven years (including one year spent in kindergarten) in the elementary school or after having reached age 12, or 12 years and 6 months. If this practice is followed the junior high school cannot avoid a modification of its procedures to provide for children of all types and abilities. It is doubtful whether a promotion plan as recommended above will increase materially the ranges and variations in pupil abilities above those existing at present in junior-high-school groups.

(To be Continued)

<sup>12</sup>See also Mary M. Reed, *An Investigation of Practices in First Grade Admission and Promotion*, p. 29. Teachers College Contributions to Education No. 290. Bureau of Publications, Teachers College, Columbia University, 1927.

<sup>13</sup>Ninth Yearbook, pp. 108-110.

<sup>14</sup>For data on this point, see Ninth Yearbook of the Department of Superintendence (1931), pp. 47-48.

<sup>15</sup>Ibid., p. 79.

<sup>16</sup>Ibid., p. 83.

#### BOOKS ARE NEEDED

It would seem to be the essence of wisdom that students be supplied with the books and equipment necessary for learning as a first responsibility of administrators after the teachers have been cared for. In the better times that are coming, as they always have, there will be more money available for necessities, and management should in my judgment see that the book supply is cared for before buildings and grounds and other material things. First things should come first.—W. W. Charters.



MACHINE SHOP INCLUDING ELECTRIC WELDING AND ACETYLENE WELDING, BREA-OLINDA UNION HIGH SCHOOL, SAN DIEGO, CALIFORNIA

## The Brea-Olinda Plan for High-School Education Plus *Occupational Preparation*

**H. C. Steinmetz, Extension Director, State College, San Diego, California**

Parents rightfully expect children in secondary schools to be trained for admission to institutions of higher learning. During the past few years there has been a steadily growing demand that high schools likewise give training in practical fields so that (1) students who may not continue their formal education may be fitted in some degree for definite employment, (2) continuing students may be equipped to earn a part of their way, and (3) advanced study may be based upon some concrete occupational experience.

Generally speaking, the ideals of the high school point only to training for more abstract and theoretical learning. With the rapidly growing demand for another sort of training, it becomes imperative that educators seek to devise a program which will effectively handle both. Apparently a hindrance to the rapid development of a program adjusted to these two ideals is a lack of appreciation on the part of schoolmen of the possibilities of effective training in practical fields related to the earning of a livelihood.

The Brea-Olinda Union High School, San Diego, California, has devised a program which meets the demands of the most exacting college-preparatory course and also gives a sound training in some field of major occupational interest within a student's comprehension. (The term "vocational" might better designate the point here, but "occupational" fits and is to be preferred in view of the current misuse and deterministic implication of "vocational." It is surely more to the point in this unstable world to fit a child of 14 to 18 with information and skill basic in a general industrial or commercial field, than to stress vague vocational pigeon-holes into which unanalyzable personality and unpredictable opportunity must fit. Whether this viewpoint is wise or not, the fact remains that "occupation" has more meaning and sustains motivation better than "vocation.")

### Problems of Vocational Programs

The development of the program, which is now in force and will later be described, required a review of "vocational-training programs" in secondary schools of the country. From such a study the following deductions were drawn:

1. The growth of industrial-arts courses in secondary-school systems and the development of trade-training instruction of high-school level predicate the necessity of supplying a type of apprenticeship training.
2. High-school students must have an adequate academic foundation in order to realize their maximum possibility in any occupational field.

3. Industrial-arts and trade courses are too often created for the poor or indifferent student, and at best for those who desire to limit their educational training to a minimum of years.

4. The age, experience, and judgment of high-school students defeat positive vocational training at the high-school level, and no matter how effective, still require of the student a relatively advanced apprenticeship training in industry.

5. The theory upon which industrial-arts and vocational courses have been developed—that is, adjustment to meet the provision of part-time school laws and to care for poor, indifferent, and over-age pupils—has defeated the best ideals for this type of training and the aims originally inspiring its development.

6. Vocational training is expensive and difficult of operation in a small high school.

7. Students generally, for reasons known to all, have shunned "vocational" courses.

8. Industrial-arts and trade courses, if properly administered, can be expanded to apply to all students.

9. Industrial-arts courses generally are not "vocational" courses.

10. "Vocational" courses in trade schools or regular four-year secondary programs do not, as a rule, require adequate academic or cultural training.

11. Trade schools train students in one specific trade rather than a field of occupational interest.

These observations were carefully considered in the organization of the Brea-Olinda plan. The end in view was to create a program which would provide the traditional type of high-school education plus a basic occupational training within a field of major interest, the two dovetailing for greater effectiveness in each.

The first definite aim arising out of the study of existing types of trade education was to afford opportunity for efficient trade training of a general apprenticeship sort in the major fields of nonprofessional occupation. Specialization is common and essential, but employment within a given trade is increasingly problematic because of oversupply and mechanization; high schools must lay a foundation of training which may quickly become a specific skill after



MR. CARL O. HARVEY  
Principal, Brea-Olinda Union High School, San Diego, California.

a short period of apprenticeship. The second definite aim logically followed: to avoid sacrifice of common high-school benefits, to give adequate academic background for unlimited educational and occupational progress commensurate with ability and ambition.

#### Supporting Sociological Philosophy

While struggling to express in organized manner the philosophy supporting the comprehensive plan of the Brea-Olinda Union High School, I happened to discover the exact thing in a book by Ross Finney: "The benefits of vocational education are so numerous and concrete that it should be universal. In a democracy this means that it cannot be separated from a liberal education without vitiating each. Every youth should be prepared to support himself and to accept economic responsibility. Therefore training must be afforded in every kind of skilled work. Vocational education is the biggest unsolved problem in modern education, principally because fact and theory go separate directions; educators and industrialists must gradually come together upon common sociological grounds."

Furthermore, practical training is not alone supported by vocational aims. Recent events have rightly called into question much of the so-called vocational training, although we seem to observe fewer occupationally trained men out of employment than white-collar opportunists. This observation would be clearer in a more orderly society. The Brea-Olinda school stresses practical training rather than vocational, in large part on account of the purposive character this emphasis gives education, and the self-reliance a practical training affords. An occupational interest gives meaning to the abstract and prepares the student to engage significantly in a co-operative society.

Individual differences in ability are easier taken care of in practical training, through individualized instruction, than in rigidly academic classroom situations. Counseling is more effective through controlled application of interest than through preaching from instructors, texts, and business representatives. Assuming that a high-school student desires to transfer from the field in which he may have been practically trained, he can be no worse off than he would be under the usual system of advising, and is better able to choose another field and to adapt to it.

#### Difficulties of the Program

Since vocational training in high school requires specialized instructors, presumably small classes, expensive equipment, and opportunity for actual work, smaller schools have found it difficult to develop successful programs. The common conception of vocational training has been that it was for the few rather than for all. These things have discouraged the development of occupational training in high schools; as a consequence, industrial-arts courses and adjustment classes have been created for vocational sampling. The indirectness of the existing vocational endeavor can be corrected and such curricula placed in proper balance with academic work, and justified.

The main problem confronting the average principal is to overcome the prejudice of students against practical and vocational subjects. They have been made to feel that their training must be of a type to raise them above the status of their parents and that this can be done only in college-preparatory curricula. Administrators have inadvertently sought the easy way out for part-time students, poor students, and indifferent students, by transferring them to trade classes. This has become apparent to students until, often rightfully, they believe trade courses are created and maintained for the "dumb-bells" only. The attitude of students, parents, and administrators toward such courses has



CLASS IN ELECTRICITY, BREA-OLINDA UNION HIGH SCHOOL, SAN DIEGO, CALIFORNIA

been so completely lacking in appreciation and so displeasing that instructors have allowed their work to deteriorate into the mediocrity generally attributed to them.

Another assumption has been that trade courses require no academic training, with the result that interest in the work offered lags behind opportunity. An insistence must be made upon the fact that theory and practice are inseparable and that history of machinery is as important to the machinist as the history of American government to the good citizen. For this reason every trade course offered should be placed upon the same basis as the academic course, with the same amount of credit, the same idealism, the same insistence upon qualitative production. Trade training is a cultural as well as an economic necessity.

#### Working Out the Plan

Like most good things the plan is simple. Its conception and development have been almost entirely the achievement of Principal Carl Harvey, in whose words (of a letter) I shall give it:

"In 1928 the faculty of the Brea-Olinda Union High School started the foundational work upon which the trade-academic program is now being developed. Unified directed study was inaugurated and in three succeeding years perfected by every member of the faculty, until today the method of instruction follows the general plan of directed study but with individual adaptations devised by various instructors. The faculty pledged themselves to become conversant with the best methods of instruction and to exercise ingenuity and painstaking, critical experimentation.

"At the end of the first year of the development of the directed study idea, a 60-minute class period was inaugurated, with the class period definitely divided into two parts; the first 30 minutes spent in problem solving, lesson review, and lesson assignment; the last 30 minutes in directed preparation of the advanced assignment. While the 60-minute class period reduces the number of periods per day, directed-study instruction increases the quantity and quality of work of the student, which more than offsets the value of a study hall. Better habits are being developed and a better understanding of problems is possible. The longer period has simplified scheduling and programming in science, art, and shop classes.

"The program is developed with the idea that every student will select a trade major, so to speak, in addition to his academic or cultural major. This trade will be selected on the basis of immediate interest, allowing for adjustments. He is told that his interests may change, but with proper counselling, by the end of the high-

school period, he will have acquired a definite knowledge of some particular trade or semi-profession, which he may present to a prospective employer with some assurance that his value as a result of his high-school training, will be immeasurably greater than is generally the case.

"In the spring of 1931 the patrons of the high-school district were informed concerning the plan and asked to give cooperation and encouragement to its development. Students had placed before them full information and literature concerning the operation of the plan. A selected group of instructors enrolled them after they had been given specific informational preparation in the courses selected. The response of both parents and students was most encouraging and the first three years of actual participation is extremely gratifying.

"In order to accomplish this program it became apparent that more than sixteen units of credit must be earned. The six-period day and directed study revealed the way. The change from the old recitation method enables us to offer our students twenty units of work, by encouraging them to take a full day's schedule and a wider selection of subjects, rather than allowing the usual study hall interspersing the day's program. The classroom strain is eased with the break of the shop period. A higher degree of concentration is developed. Interest supports effort because students realize practical application. Better study habits are formed. Students who ordinarily drop out are retained in school. Students who have dropped out are returning. Parents are asking why this type of instruction is not commonly developed. Disciplinary problems, never of serious nature, are decreasing. Faculty interest in classwork is increased, and appreciation of the program, based on experience, so far is beyond their own expectations. Students are beginning to realize what high-school work is all about. The so-called cultural subjects are finding an appeal to students who formerly could develop no interest in them.

"We have not yet found an unsurmountable problem, and all indications are that the establishment of this program in our school will be much easier than we had anticipated. The complete operation cannot be perfected before 1934. Any doubt that may have been in our minds when this program was first inaugurated has been dispelled and confidence in success is assured."

#### The Courses

This does not mention the necessary aids to such a plan, which Mr. Harvey has worked out carefully, such as clear and unencumbered student handbook, explanatory letter sent parents

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# SCHOOL SUPPLIES Buying—Aiding or Crippling Education

The time of the year is at hand when school authorities are engaged in examining last year's consumption of school equipment and supplies, taking an inventory of the stock on hand, estimating the needs for the coming year, and placing the orders for the necessary purchases.

The importance of choosing equipment and supplies which are primarily valuable for the educational service they will give at a reasonable cost, permits of no argument. The tendency of the day is to scan the school budget closely, and to think and act in terms of economy and retrenchment. Thus, the order of the day is to make the dollar go as far as possible in operating the school plant and in conducting the program of instructional services. In the smaller schools, the school-board members must rely upon the superintendent for initiative in determining what is necessary and must exercise their best judgment in making the final selections and purchases. In the larger cities, the boards of education must rely primarily upon the educational executives to set up the equipment and supplies needs in terms of educational objectives, teaching methods, and current practices in class organization, consumption quotas, and standards of quality.

While in prosperous years there has been a tendency on the part of educators to insist upon educational advantages of articles even to the point of unjustifiable cost and to buy generously in quantity, the present inclination is to underbuy in quantity and quality, and to hold that practically any article is good enough for school purposes. Regardless of intrinsic value and teaching use, cheapness seems to have become the single criterion for selection.

The trained teacher knows that unsuitable items for equipment are a waste of school funds and school time. They represent not only a loss in dollars and cents, but it is an actual detriment to the instructional job which the teacher is carrying on. The conscientious teacher will rather see her salary schedule cut than allow her tools of instruction to be cut to the point that endangers the value of her entire service. What value is there in the best trained teacher of reading capable of applying the most effective and modern methods, if she has not the right reading materials? How can the most carefully evaluated objective in social science, in shopwork, in general science

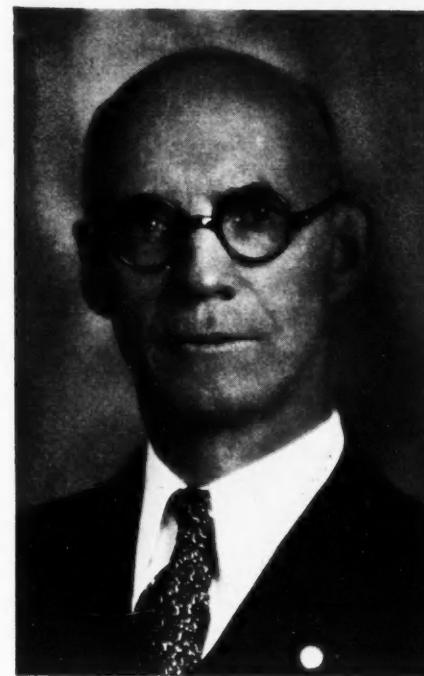
be attained if the teachers have not the immediate necessary materials and supplies for study? Similarly, the school-business executive knows that articles used for operation and maintenance of buildings are worse than valueless if they fail to meet the test of genuine economy. Why buy coal that is low in price, if it is inferior in heating quality and injurious to the boilers? Why waste the time of janitors with inferior cleaning materials and tools? Why apply paint that does not stand the test of ultimate economy in application and wear?

All the foregoing suggestions have been made repeatedly, but it appears that, due to the present tax-collection difficulty, they have been forgotten.

In other pages of this paper we have been discussing the so-called "regular school trade." Strangely, the Federal Government has now come forward with an industrial-recovery program which includes many of the underlying principles and procedures suggested in our discussions of the school trade. Under this legislation price is not to be the final determining factor in school purchases, and the "regular school trade" is to be recognized as a part of a great national recovery program.

School boards and purchasing agents should be prompt to cooperate. In spending the taxpayers' money there is the obvious obligation to give employment and to permit the taxpayers' children an opportunity of education. Not all commercial people are dishonest, and buying is as fine a job as selling. If the buyer knows merchandise and knows prices, and if school boards will give greater leeway on public bidding, a new period in school buying may be developed. There is much shoddy merchandise in many schools and a higher standard of quality of school equipment may be developed.

The great social and civic purposes of the schools and their major contribution to the economic recovery which is so anxiously sought, can be realized if school boards set the pace in recognizing quality and merit in the purchases they make, and if they further set the pace in buying immediately all of the equipment and supplies essential for the purposes of the schools during the coming year. The school board which is entrusted with the large task of rearing the rising generation for citizenship has peculiarly the duty of exemplifying high standards in ethics and good methods in anticipating the needs of education.



JESSE H. BINFORD  
Superintendent of Schools,  
Richmond, Virginia.

Mr. Binford, who was recently elected superintendent of schools to succeed the late Albert H. Hill, has filled the position of assistant superintendent for the past fourteen years. He is a graduate of the University of Virginia and holds a Master's Degree given by the University of Wisconsin. He also completed special courses in school administration and supervision at Teachers College, Columbia University.

Following his graduation from college, Mr. Binford began teaching in a one-room country school in Arkansas. Later, he went to Richmond as principal of one of the elementary schools. In 1912 he left Richmond to become secretary of the Cooperative Education Association of Virginia. From this position he resigned to become State Supervisor of Rural Schools. In 1917 he returned to Richmond to take the position of assistant superintendent of the city schools.

Mr. Binford has been active in civic and educational affairs of the community. He is a past president of the Virginia Education Association and was a delegate to the World Federation of Education Associations at its meeting in Geneva. He is the author of textbooks on educational subjects and is a frequent speaker at educational gatherings.

structed to watch the use of electricity, gas, and water at all times, and to eliminate waste in the use of these utilities. In this connection, we have inaugurated a system of classifying the different schools according to the average daily attendance, by grouping together schools of one hundred up to a thousand enrollment, and schools above a thousand enrollment. Each month the water and light consumption is tabulated on a comparative chart, and the various principals are shown wherein the consumption of light and water differs in schools of approximately the same size and physical conditions. If the principals can be reminded monthly that their schools have increased or decreased the amount above or below the desirable normal consumption, we hope in time to help the janitors effect an even greater saving in these items.

## Education of Janitors

Los Angeles maintains a training school for janitors and engineers at the Frank Wiggins Trade School, and the training which the men receive here fits them to assume more responsibility in the performance of their duties. Among other things the men are taught to take care of minor adjustments around the buildings, to install washers in and repack faucets, to clean lawn sprinklers, to replace gaskets in drinking fountains, to mend hose, to clean flush valves, to replace toilet balls, to install washers in flush tanks, to remove stoppage in drains, to clean grease traps, to clean shower heads, to replace fuses, to replace boards on wood walks, to fill dangerous holes in playgrounds, to renew springs and tighten screws and bolts in door checks, to repair window shades, to make minor repairs to furniture, to clean soap containers, to recharge fire extinguishers, to replace hose and gaskets in fire extinguishers, to replace paper containers, to repair belts, and to replace belts on sewing machines.

Another very material saving which we have been able to effect is in janitors' supplies. We have found that when the janitor understands that his rating is affected if he uses too many supplies, he is much more careful in their use, and a little elbow grease takes the place of amounts of cleaning agents which previously had been indispensable. We have been very successful in improving the condition of our buildings, notwithstanding the fact that we have less help than in previous years, simply by having

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## Adjusting School Operation to a Reduced Budget

**Murray P. Wylie, Superintendent of Building and Maintenance,  
Los Angeles Board of Education**

The subject of adjusting school operation to a reduced budget is one that is of vital interest to each school-board member and school-business representative. Each school district undoubtedly approaches the subject from a different angle.

I will give only a brief outline to show how it has been possible to keep our school plants in a satisfactory condition with less money. Naturally, the first thing that comes to the mind is the reduction in salary of janitors, engineers, gardeners, and inspectors. This, however, can only account for a small portion of the saving which is desirable. In

endeavoring to reduce operating costs we must not lose sight of the fact that we have several points which must be balanced against this cost; namely, (1) the sanitary condition of the building, (2) the elimination of accident hazards, (3) the proper care of the grounds and, in fact, all items which have to do with the health and safety of the pupils.

The Los Angeles school organization, at the beginning of the last fiscal year, reduced wages 10 per cent. In addition to this, we have insisted that the janitors take on an increased load, especially in helping maintain buildings and grounds. There are many things that the janitor can do about the plant, which would in normal times be taken care of by maintenance men. Janitors have been in-

<sup>1</sup>Abstract of an address before the California State Association of School Business Officials.

# Organized Play and Recreation in Newark N. J.

Lewis R. Barrett, Director of Recreation, Newark

Organized play and recreation of a city-wide compass in the city of Newark, N. J., is at present and has been for several years under the immediate supervision of the superintendent of schools, a director of recreation, and a small supervisory staff. To direct such a play and recreational program in Newark, which is a congested industrial city of 450,000 people in the metropolitan area surrounding New York City, means promoting and directing play and recreational activities which meet the interests of children of preschool age, children of school age, youths, and adults. It necessitates the extensive use of school buildings and grounds, parks, and public buildings adapted for recreational use. It necessitates also the very closest of coöperation of the recreational staff with the school principals, heads of departments and teachers, with the staffs of the character-building, social, civic, and welfare organizations of the city, as well as the officials and employees of the city and county park systems.

The need for the extensive use of school buildings and grounds and the coöperation of the school personnel, is so great that it would be practically impossible for an outside agency to make the best use of facilities, maintain the necessary coöordination and coöperation with the schools, and at the same time leave the schools free to conduct their program. Accordingly, the Recreation Department of the board of education in Newark functions as a separate department under the board of education and has charge of all activities in the schools after the close of the school day. The department is charged with the responsibility of promoting and directing wholesale play and recreational activities to meet the needs of the community.

## Purpose of the Program

Superintendent of Schools John H. Logan has said: "Any well-planned community play and recreational program must be of sufficient breadth to meet the play and recreational needs of all different age groups. Music, dramatics, social, manual, club, civic, physical activities — all have their place in such a program. Such a program also should be closely coöordinated with the curricular program of the school, especially that part of the program which has to do with the play life of the school-age child. In the main, the play and recreational activities for this group should have their start in the curricular program and should to a degree at least be a carry-over from this program."

Obviously, to promote and direct this type of a community play and recreational program throughout the twelve months of the year, requires more extensive facilities than are usually associated with playgrounds and athletic fields, as well as a very competent staff, trained and experienced in organizing and directing play and recreational activities and familiar with modern educational principles and practices. In Newark, the schools offer the greatest number of facilities adapted for the play and recreational program; their geographic location is such as to make them logical community centers; and the board of education has access to well-trained professional leadership, free from political entanglements. Therefore, the play and recreational program is promoted and directed mainly around school facilities, and the staff is employed on a similar basis as that of the teachers, although in the main the play and recreation staff is a separate and distinct group.

## The Community Problem

As stated above Newark is a congested industrial city. A high percentage of its population

is of foreign parentage. Large families living in small quarters in houses, tenements, and apartments, with no yards or play space, make home play and recreation increasingly more difficult. Unfortunately, as the city increased in population, little thought was given to the provision of play space. As a result the provision of play space today necessitates the purchase of *improved* property. This is a laborious and expensive procedure. In the meantime, leisure increases, and unless properly utilized becomes a liability to the individual and the community. To even approach meeting the community play and recreational needs under such conditions is exceedingly difficult. However, efforts are directed in the hope of at least partially meeting the need.

The efforts of the department to meet the community needs for play and recreation are directed mainly through certain established recreation centers located throughout the city, and geographically situated to serve certain needy districts. In all cases these recreation centers are located in school buildings, and the play and recreation program starts functioning immediately at the close of school on school days and throughout the day on holidays, Saturdays, and vacation periods. This program continues until 9 p.m. every day and until 11 p.m. in certain centers on certain nights during the winter months. The centers are classified according to the type of program directed. There are six such classifications, namely: Class A Playfields, Class A Playgrounds and Recreation Centers, Class B Playgrounds, Class C Playgrounds, Class D Playgrounds and Athletic Centers. A brief description of each is necessary to properly picture the department organization.

## The Centers Described

Recreation Centers where a program is directed daily throughout the year to meet the play and recreational needs of the youth of the

city, are classified as Class A Playfields. These centers are established in connection with schools where facilities are available to conduct a varied and extensive program for the boys and girls of high-school age. These facilities must, of course, include auditoriums, gymnasiums, clubrooms, reading rooms, gamerooms, etc., as well as a large area suitable for team games. Because of the age of the groups to be served by these centers, their radius of service is considered to be from a mile to a mile and a half.

Centers which are established and where a program is directed daily to meet the need of the children of elementary-school age, and where a program is also directed on certain days throughout the year to meet the recreational needs of the adults in the neighborhood immediately surrounding the center, are classified as Class A Playgrounds and Recreation Centers. These centers are established in connection with the larger elementary schools where the facilities needed for the program are available. Such facilities as auditoriums, gymnasiums, shops, cooking rooms, serving rooms, clubrooms, gamerooms, etc., are essential, as is an area large enough to conduct the outdoor physical activities necessary for the play life of the child of elementary-school age. These centers are established in quite well-defined neighborhoods, and their service radius for the playground program is considered to be from one-fourth to one-half mile.

In some of the more congested sections of the city, programs are directed daily at certain centers to meet the play needs of the smaller children of the neighborhood. These playgrounds are limited to the use of children nine years of age and under, and their service radius is considered to be one-eighth of a mile. These centers are classified as Class C Playgrounds.

## The Annual Cycle of Activity

All the play and recreation centers classified as Class A Playfields, Class A Playgrounds and Recreation Centers, Class B Playgrounds, and Class C Playgrounds, are open daily throughout the year. The program is in charge of trained leaders, who are appointed on a yearly basis and who are assigned to the teaching staff of the school where the center is operated. These leaders report for duty before the close of school



Happy and healthful recreation is the first objective of the Newark play program. Participation of the greatest possible number of children and adults is a principle constantly observed. An Indian operetta was produced by this happy group, which not only sung and acted, but made its own costumes and properties.

in the afternoon and assume the responsibility for the conduct of all recreational activities conducted at the center. They remain on duty until the center is closed in the evening. All these centers have their play areas lighted for night play and activities are conducted on the areas until 9 p.m.

In addition to the centers which function throughout the year, additional playfields and playgrounds are supervised at certain seasons of the year. All such playfields and playgrounds are classified as Class D Playgrounds, and trained leaders are employed for the length of time the playgrounds are open.

Another phase of the recreational program is the promotion of organized athletics among the commercial houses, industries, clubs, lodges, etc., of the city. This is a highly organized program and generally is directed through the organization of leagues. In the spring, summer, and fall the activities for this group center around the athletic facilities available in the city and county parks and athletic fields. In the wintertime the activities for this group are directed in certain centers, which are classified as athletic centers. Teams report at the centers to which they are assigned and play the games scheduled. Officials and doormen, employed by the recreation department, are in full charge of all games. These centers are separate and distinct from the regular year-round recreation centers classified previously in this article.

#### "Interest" as Heart of the Program

The program directed in the different centers is an *interest* program. Emphasis is placed upon actual participation in an activity by the individual rather than upon watching someone else participate. Interests vary with individuals. To discover or create these interests and organize the activity to meet the interest is the job of the recreational staff. The age of the individual has a great deal to do with his play or recreational interest; therefore the program in the different centers varies according to the age of the groups to be served. In the Class C or small children's centers the program only includes activities which are of interest to children nine years of age and under.

In the Class B centers the program is more varied and broader. With the age group to be served in these centers we find interests in almost anything. Because of the desire for clubs and gangs with this age group, emphasis is placed upon club organization. The leaders aid in the organization of the clubs, election of officers, etc., assign them to rooms for meetings, give advice as to the proper conduct of meetings, and see that the program of the center includes all types of activities in which they can participate. In many of the Class B centers vacant classrooms have been transformed into clubrooms, with radios, pianos, comfortable furniture, etc. The transforming of these rooms into clubrooms is a project of the centers in which all are interested. Old furniture may be rebuilt as a project in manual arts, curtains and decorations as a handicraft project, and the purchase of a radio from receipts of a dramatic or musical production. Reading and quiet gamerooms are established as are active or "rough house" rooms. In these Class B centers we find from forty to sixty clubs organized. We find orchestras, glee clubs, puppet groups, all types of handicraft projects, dramatic clubs, all types of hobby clubs, and in addition an active physical program in which both boys and girls participate.

One of the organizations of the centers which is of great value to the center is the Club Council. This council is made up of representatives selected by the different clubs and groups in the center to serve on the council. This council selects its own officers, conducts its own meetings, and functions as an advisory group to the center director and his staff.



The least privileged groups of a city have the greatest need of play facilities. Here is a typical game activity in a crowded neighborhood with a mixed population of colored and foreign children.

#### Child and Adult Centers

The Class A centers have the responsibility of directing two programs — one a program for the children of elementary-school age and the other a program for the parents and adults of the neighborhood. The adult program functions throughout the year but more intensively from November through April. On Tuesday and Friday nights of each week for these six months the center is open until 11:30 p.m. On these nights the efforts of the staff are directed in the promoting and directing of an adult recreation program around the facilities of the school. Here we find cooking clubs, sewing clubs, groups working in the shops, choral societies, symphony orchestras, jazz orchestras, public-speaking groups, dramatic groups, glee clubs, fencing, boxing, and wrestling groups, groups of men and women using the gymnasium for recreative exercise of all types, quiet gamerooms, reading rooms, health lectures, debates, and so on, through all types of activities which meet the interests of the adults in the community.

Each one of these Class A centers has what is known as a community council. This council may vary in number of members from five to eleven but in all cases the members are people who actually live in the neighborhood surrounding the school and who are vitally interested in the success of the center. The director of the center is responsible for forming this council and it acts as an advisory council to him. Its object is to aid in feeling the pulse of the community as to the neighborhood's recreational needs and interests and aiding in the promotion of the program of the center to meet these needs. These councils meet regularly throughout the year with the center director and his staff.

Because it is of the utmost importance that the Class A center directors and assistants be familiar with the neighborhoods in which their center is located; know something of the housing and social conditions; the welfare problems as well as the different welfare and social agencies working in the neighborhoods, they are required to spend at least ten hours a week outside of the regular center hours working in the community. This work is considered a part of their regular work and compensation for it is included in their yearly salary.

The program directed at the Class A playfields is similar to the program at the Class B centers, except that the physical program includes more of the team games. This is due, of course, to the interest in team play of the age group to be served at these centers.

#### Required Staff Qualifications

The staff of the department which directs the program throughout the different centers is employed on a similar basis as teachers. Applicants must meet certain educational requirements depending upon the type of center to which they are appointed and must also pass a written and oral examination given by the board of examiners. This is the same board that examines all applicants for teaching positions.

Applicants for the position of director in a Class A playground or playfield must possess one of the two following qualifications:

I. (a) Graduation from an approved college or university, (b) a minimum of one year's additional training in recreation work at a recognized school or university, and (c) at least two years' successful experience, or its equivalent, in recreation work including playground work, club work for children and adults and community-center experience.

II. (a) Four years' experience in the Newark city playgrounds as a playground leader in Class A playgrounds or a playground director in Class B, C, or D playgrounds, and (b) 450 hours of approved college work.

Applicants for the position of play-leader in a Class A playground or playfield must possess the following qualifications: (a) Graduation from an approved four-year high-school course or its equivalent, (b) graduation from an approved three-year normal-school course or its equivalent, and (c) two years' successful experience in playground work.

The qualifications of applicants for the position of director in a Class B playground are the same as for a play-leader in a Class A playground.

Applicants for the position of play-leader in a Class B playground must possess the following qualifications: (a) graduation from an approved four-year high-school course or its equivalent, and (b) graduation from an approved three-year normal school or its equivalent.

Candidates for positions in Class C or D playgrounds must possess the following qualifications: (a) graduation from an approved four-year high-school course or its equivalent, and (b) at least two years' attendance in a professional training school, school for teachers, college, or university.

All persons qualified and appointed to a playground position may be advanced to a higher position on a playground when such persons meet the qualifications required for such position and playground.

(Concluded on Page 60)

# OBJECTIFYING School Marks

Willard W. Beatty, Superintendent of Schools, Bronxville, New York

Let us assume that your son brought home this month the usual report card, with percentage grades for each subject:

Reading	85
Geography	72
History	98
Arithmetic	65
Spelling	77
Writing	60
Deportment	80

What is the most you can know about your son? He is very good in history, apparently; good in reading; fair in geography and spelling; poor in writing and arithmetic. The deportment is problematical. Whose deportment rates 100 per cent, and who is capable of judging? By what standard were these ratings obtained? What accurate measure does the average school possess for determining accomplishment in reading or writing? What more accurate measure is possessed for history or geography? Or even for spelling or arithmetic, those two subjects where right and wrong appear to be incontrovertible?

### Subjective Grading Unreliable

Over fifteen years ago, Dr. Daniel Starch, then of the University of Wisconsin, decided to find out the value of teachers' examinations and teachers' marks. He chose some well-prepared but typical examinations given in the University of Wisconsin High School, together with samples of papers written by students taking these examinations. He had the examination sheets, together with instructions for marking the finished papers, duplicated and then secured photostatic copies of the student papers. He chose for his initial experiments examinations in freshman English, geometry, and American history.

These facsimiles were mailed to 142 English teachers, 115 teachers of mathematics, and 70 teachers of history, in high schools throughout the United States. Each teacher was requested to read and mark the paper according to the general directions, but otherwise to use the same judgment which he would apply to papers originating in his own school. These people did as requested by Dr. Starch, and returned the papers to him after scoring.

To laymen, and to almost the entire teaching force of the country, the results of Starch's<sup>1</sup> investigation were astounding. The same mathematics paper, identical even to handwriting, blots, erasures, and corrections, was graded as low as 28 per cent by one teacher, as high as 92 per cent by another, and by the remaining 113 teachers at practically every intervening grade. With the English paper the results ranged from 50 per cent to 98 per cent, and on the history paper the scores varied from 43 per cent to 90 per cent. There is an interesting tendency for the "mode"<sup>2</sup> to fall at about the "passing grade." Two of Starch's graphs are reproduced to better tell the story.

By that simple experiment the validity of subjective marking was knocked into a cocked hat. It revealed that an honor student in Boston might be classed as an ignoramus in San Francisco on the basis of identical evidence.

The experiment of Dr. Starch has been repeated by numerous other psychologists since 1912. Practically every subject of the curriculum has been subjected to the same experience. The results have been invariably the same. The

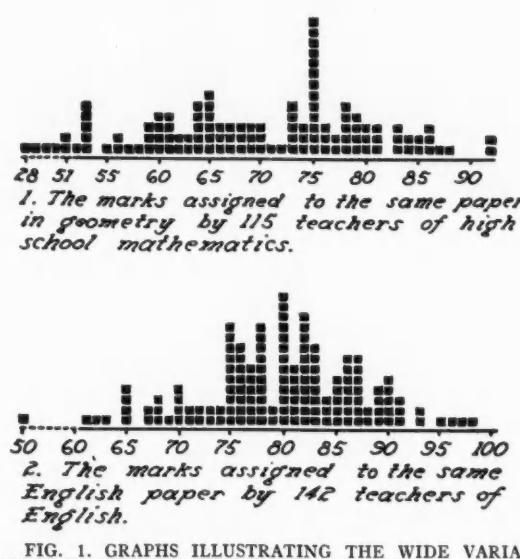


FIG. 1. GRAPHS ILLUSTRATING THE WIDE VARIATION IN MARKS ASSIGNED BY TEACHERS IN A TEST MADE BY DR. DANIEL STARCH.

training, experience, intelligence, or educational philosophy of the persons doing the scoring do not influence the results. Subjective judgments have repeatedly proved unreliable.

Not content to leave the matter there, teachers of known probity and exactitude have graded identical papers two or three times with an elapse of several days between scoring. While the discrepancies have not always been so glaring, they nevertheless exist in large measure. The general conclusion with regard to subjective measures of all kinds is that in the absence of some scale against which to compare the product to be measured, judgments of even the more discerning are worthless.

The "five-point scale" of many schools and colleges has more to commend it. Experimental evidence has shown that greater agreement will occur between judges when the range of possible classifications is greatly curtailed. However, without some standard to serve as a basis of comparison, human judgment is highly infallible.

### Objective Tests Now Possible

Recognition of the impossibility of accurate measurement without standards of comparison, has led to the development of objective tests and scales so constructed as to produce more uniform results. The Thorndike and Ayres handwriting scales, the Stanford Achievement, McCall, Monroe and Shank Tests in Silent Reading, the Gray Oral Reading Test, and the Compass Diagnostic Tests in Arithmetic are a few of the many which have been prepared and standardized under current school conditions.

In order that such "standardized" tests may serve their purpose more effectively than the older school examination, experience has shown that certain conditions must hold:<sup>3</sup>

1. The test must be valid. Validity is the degree to which a test or examination measures what it is intended to measure; that is, in general, the degree to which a test parallels the curriculum and good teaching practice.

2. It must be reliable. Reliability refers to the stability of an estimate of a pupil's ability from one test to another. In other words, equivalent forms of the test should show the same results. Reliability is guaranteed by the objectivity of scoring (the degree to which two people in scoring the same test will secure the same results) and the degree to which the test covers the essential points to be tested.

<sup>1</sup>Starch, D. and Elliott, E. C.: "The Reliability of Grading High School Work in English," *School Review*, 20:442-457; "The Reliability of Grading Work in Mathematics," *School Review*, 21:254-259; "The Reliability of Grading Work in History," *School Review*, 21:676-681.

<sup>2</sup>Mode: the point in the graph where the largest number of scores fall.

<sup>3</sup>Ruch, G. M., *The Objective or New Type Examination* (Scott, Foresman & Co., 1929).

Where norms exist, it is then possible to compare the work of a child or a whole class with what children of similar experience throughout a city, state, or nation are able to do. Norms are secured through widespread administration of the tests, under controlled conditions. The value of the norms depends, of course, on the methods used in securing them.

Objective tests of this nature which are in addition diagnostic of weakness, are now in use in the Bronxville, New York, schools in place of the older "essay type" and subjectively graded examination. Furthermore, tests of this type combined with cumulative reviews are given at the conclusion of each topic of study. Weaknesses are thus revealed as they develop, and remedial work is supplied at once. No child in the Bronxville schools can fail in an entire year's work on a single test. This fact has removed the old fear in which final examinations were held.

For the good and sufficient reasons stated above, reports to parents based on subjective estimates have been practically eliminated from the Bronxville schools.

Furthermore, we have examined and rejected as of little positive value to teacher, pupil, or parent, all qualitative marks divorced from an objective statement of what is being qualified. There may be a vague satisfaction in knowing that the teacher rates Billy as "Good" in arithmetic. It certainly doesn't tell us whether he may therefore be expected to know compound multiplication. On the other hand, if Sara is reported "Poor" in written English, we may experience an uneasy feeling that something ought to be done about it, but "What shall we do?" That is a poser.

We have not been content, in recognizing the difficulty of reporting fairly a pupil's progress, to stop there. We have sought a means to keep the pupils and parents accurately and objectively informed of work being done. The Bronxville goal card<sup>4</sup> is our present answer. We believe that it marks a forward step. While confusing, perhaps, at first glance, we believe that closer familiarity will demonstrate that it is more helpful and informative to all concerned than the report cards which it supplants.

### What is a Goal Card?

The Bronxville goal card is much larger than the usual report to parents. In the elementary grades it has become a double-folded sheet with a single-page dimension of 8 by 10½ in. The first page carries an explanation to the parents describing the manner in which the goals are to be interpreted. The double inside page carries the objectives for two years of work in each of the following school subjects: written English, oral English, reading, social studies, life science, and arithmetic. We have grouped together the first- and second-grade goals, the third- and fourth-grade goals, the fifth- and sixth-grade goals. The last page, in addition to a record of days absent and times tardy, gives space for the parent's signature and allows opportunity for such personal notes with regard to the child as the teacher may feel called upon to write. Through the use of self-instruction materials and other provisions for individualizing rates of progress, the children in our classes may advance as their individual abilities allow. When goal-card topics are completed, achievement is measured by objective tests, and the dates of completion are entered. There is no reason to assume that in any class any two children will be marked identically, except possibly in such subjects as the social studies where social participation in the group is so important as to minimize emphasis on individual rates of accomplishment.

<sup>4</sup>The term "goal card" and the basic idea of this form of school report is taken from Winnetka, Ill., where this writer had the privilege of working for some years with Supt. Carleton Washburne.

## BRONXVILLE SENIOR HIGH SCHOOL GOAL SHEET

Pupil's Name ..... Group .....

CHEMISTRY		
Beginning Date .....	Date O.K. ....	REMARKS
<b>PRIMARY OBJECTIVES</b>		<b>SECONDARY OBJECTIVE</b>
<b>Goal 1.</b> To determine properties of water. Can demonstrate physical properties of water. Can recognize dispersion and purify water. Can separate water into elements and demonstrate physical and chemical properties of oxygen and hydrogen. Can explain structure of atom and molecule and demonstrate electronic nature of chemical combination. Can explain electromotive series. Rating.....		Attainment of skill in scientific method: 1. Laboratory method. 2. Use of scientific measurements. 3. Use of methods of research.  During each goal period the solution of a problem will be attempted by each student to determine progress in the attainment of the secondary objective.
<b>Goal 2.</b> To understand and use simple chemical equations. Can determine and use formulas. Can use equations and determine weights and volumes of reactions. Can demonstrate law of definite and multiple proportions. Can use molecular and atomic weights. <b>Goal 3.</b> To determine composition of air. Can demonstrate experimentally the presence of water vapor, carbon dioxide, oxygen and nitrogen in air. Can demonstrate and explain importance of nitrogen fixation. Can prepare and demonstrate properties of nitrogen, nitric acid and ammonia. Can prepare and demonstrate properties of oxides of nitrogen. Rating.....		
<b>Goal 4.</b> To determine properties of acids, bases and salts. Can name acids, bases and salts. Can prove relation of ionization to electrolysis, chemical activity and speed of reaction. Can prepare normal solutions, demonstrate mass action and chemical equilibrium.		

FIG. 2. EXCERPT FROM A HIGH-SCHOOL GOAL SHEET IN CHEMISTRY

ment. A study of the third- and fourth-grade goal card will show that it attempts to accomplish certain definite things:

1. To set forth in objective statement each fundamental ability, skill, or piece of knowledge which a child may be expected to acquire in third and fourth grades. These are "minimum" statements, dealing largely with the traditional learnings of the elementary grades. A child will learn much more than is here set forth during these two years; but these additional learnings will be difficult to measure objectively (or subjectively either) and we hesitate to list them.

2. To indicate to the parent, as these goals are mastered, the progress made by a child. Each time the card is sent home for approval, the parent may see clearly: first, what the child has mastered; second, those skills, abilities, or topics on which he is at work, or which are still ahead of him.

3. From the teacher's comment on the last page, to state whether the child's work during the period under consideration is accelerated, satisfactory, or slow—and whether it represents good, bad, or indifferent work on the part of the child *in consideration of his own native ability*, not contrasted to what someone else may be doing.

4. While we welcome at all times opportunities for personal conference between parents and teacher, the last-page comment also serves to notify the parent when the teacher wishes special opportunity for conference and co-operation on behalf of the child's well-being.

We strive to be objective but there are likely to be times when it may be difficult for a parent to determine just what the message is we are trying to convey. We therefore invite parents to come directly to the teacher for a personal interview to clarify misunderstandings. We believe that the goal cards are a truer measure of pupil accomplishment than reports of the older type. Most of the children have been quick to see the advantages of this objectivity and we have secured increasing parental enthusiasm for this new form of report.

## Some Third-Grade Arithmetic Goals

Here is a portion of the intermediate (third and fourth grade) arithmetic goals. Compare the information furnished as the completion of these goals is successfully indicated, with that supplied by the usual card marked "Arithmetic—Good" or "Reading—78 per cent."

The child with the dates as entered opposite these goals knows all the subtraction combina-

tions, can prove subtraction, and can apply the combinations to the higher decades. He passed inventory and diagnostic tests with a score of 100 per cent in each case, before any one of these dates was entered. He is now working on adding examples of increased difficulty. "Carrying" in subtraction (the reader probably knew it as "borrowing"), making change, etc., and multiplication are still ahead of him. In this case, therefore, one may justly expect him to work accurately and rapidly examples like this:

$$\begin{array}{r} 7 & 76 & 149 \\ -2 & -12 & -36 \\ \hline \end{array}$$

(in which the lower number is always smaller) but not examples like this:

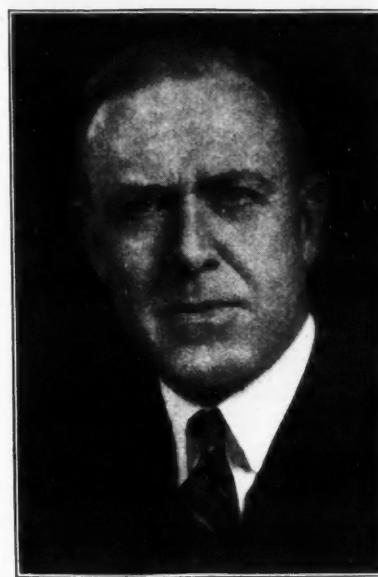
$$\begin{array}{r} 36 & 114 \\ -9 & -36 \\ \hline \end{array}$$

(in which a lower number is larger than the one immediately above)

In the elementary school the goals appearing on each card, and the grade placement of these goals, has been determined so far as possible by scientific investigation. Where experimental evidence is lacking, we have followed what appeared to be best practice.

ARITHMETIC	DATE
Beginning Date .....	9- 8-30
<b>Subtraction (Burk Self-Instruction Arithmetics)</b> Knows 14 combinations of subtraction in which the upper figure is not more than 9 (Goal A)	10-20-30
6 6 7 7 8 8 8 —2 —4 —3 —4 —2 —6 —3 8 9 9 9 9 9 9 —5 —2 —7 —3 —6 —4 —5	
Knows 7 combinations of subtraction in which the upper figure is not more than 9 (Goal B)	10-20-30
4 6 8 7 5 7 7 —2 —3 —4 —3 —2 —2 —5	
Can subtract 1 from any number (Goal C)..... Can subtract 0 from any number and can subtract a number from itself (Goal D)..... Knows the combinations of subtraction in which the minuend is larger than 9 (Goal E)..... Can prove subtraction (Goal F)..... Can apply the combinations to the higher decades (Goal G)..... Can add examples, 4 columns wide, 5 addends high..... Can "carry" in subtraction and can apply this principle to all the combinations (Goal H)..... Bronxville Test III—Subtraction—mastered..... Make correct change for: nickel..... dime..... quarter..... half dollar..... Tells time to the minute..... Reads and writes dollars and cents thru \$99.99.....	10-29-30 11- 3-30 11- 6-30 11-19-30 11-19-30
Multiplication (Burk Self-Instruction Arithmetics) Can multiply by 2 and 3, using all combinations, and with carrying (Goal A).....	Fourth Grade begins here

FIG. 3. A PAGE FROM A GOAL SHEET IN ARITHMETIC, THIRD GRADE.



MR. CHARLES H. LAKE

Charles H. Lake, who has been recently elected as superintendent of schools, of Cleveland, was born in Licking county, Ohio, and was educated in the schools of his native state. He is a graduate of Ohio State University, holds an A.M. degree given by that institution in 1910, and also completed graduate studies at Chicago University.

Before going to Cleveland in 1916, Mr. Lake was principal of the high school at Hamilton, Ohio. He was successively teacher in grade and high schools, principal of the high school, and assistant superintendent. From 1916 to 1918 he was principal of the East Technical High School, Cleveland, and had been in charge of the Cleveland high schools for a number of years. In 1919, he was made assistant superintendent of schools and had been first assistant superintendent since 1921.

## In the High Schools

In the junior high school, two influences have been at work in establishing goals. First, the newer concept of the junior high school as an exploratory period, offering to children experiences in many fields of activity, which may contribute later to vocational or avocational interests.

Second, certain college requirements imposed on the senior high school, which necessarily influence the teaching of the earlier years. The entire trend in public education at the junior-high-school level is away from certain types of academic learnings in formal grammar and mathematics which have no practical application at any point in child or adult life.

In the senior high school the subjects offered, the ground covered, and the time allotments correspond to college-entrance requirements, and pupils satisfactorily completing the work of the Bronxville High School are adequately prepared in four years to enter any American college.

Here we have divided the work of each subject into six-week units. Each unit represents what a majority of children have proved themselves able to complete in six weeks' time. It is, of course, an arbitrary standard; but we try to keep it at what pupils have done—putting forth real effort—not what some teacher assumes they ought to be able to do. Each six weeks it is therefore possible to determine, by reference to the horizontal lines, how each pupil's progress compares to what a good normal student has done.

No students in our schools are marked complete on any "goal" who fail to demonstrate knowledge of all the facts involved. Pupils who do this and no more, receive a "rating" of *P* (passed) on junior- and senior-high-school goal cards, in the ninth grade and above. We do not consider such students college material and will not recommend them.

Students who in addition to knowing facts, show a power to use these facts in the solution or the understanding of problems, are considered college material and are rated *R* (recommended). While this rating is in part subjective, we are striving to develop objective test situations which will reveal the distinction.

The excerpt from the high-school-chemistry goals indicates the application of the plan at this grade level.

# Legal Principles Underlying Taxation for Educational Purposes

Lee O. Garber, Pb.D., Indianapolis, Indiana

The courts are agreed in holding that education is a state function. Therefore, the education of children is recognized as a public duty and as a justifiable object of taxation. The power to levy and collect taxes for education, as well as for all other purposes, rests with the state, and according to organic law can only be exercised by the legislature.<sup>1</sup> As a common law principle, it may be said that the legislature has the right to delegate this power of taxation to no agencies except municipal corporations which are generally vested with the power of raising revenue for the purpose of providing the expenses of local government.<sup>2</sup> The courts are in general accord in considering school districts as municipal corporations within the meaning of this rule.<sup>3</sup> It has also been held that the legislature may not only permit school districts to levy and collect taxes, but it may compel them to do so even without the consent of those who are to be taxed.<sup>4</sup> This follows from the fact that the school districts are creatures of the state organized for the purpose of assisting the state in the administration of its educational system.

## School Taxes Are State Taxes

School taxes are not municipal taxes in any sense of the word. They are state taxes, levied for a state purpose.<sup>5</sup> This follows from the fact that education is a function of the state. The decision in a Texas case illustrates the line of reasoning followed by the courts in this connection.<sup>6</sup> In this case, suit was brought by a school district against one Richardson for the purpose of recovering certain delinquent taxes. The court, in speaking of the taxes, said: "It is thus made clear that counties and school districts, whether independent or common, are mere agencies of the state exercising delegated powers for the discharge of a state constitutional function. Taxes due counties and school districts, levied for the maintenance of a system of public free schools, are due to them as agencies of the state and in their legislative purpose are, in legal effect, taxes due the state. . . . School districts, in administering their public free school funds, are 'mere trustees.'"

A Kentucky court decision is also in point in this connection.<sup>7</sup> The general council of the city of Louisville, under authority of a statute, passed an ordinance exempting manufacturing establishments from local taxation for a period of five years as an inducement to locate in Louisville. In 1913 action was brought by the board of education of the city of Louisville

against the assessor of the city and two manufacturing establishments for the purpose of obtaining a writ of mandamus compelling the assessor to assess, for the use of the board of education, property owned by the two manufacturing establishments. The circuit court ordered the writ of mandamus, and the assessor and the two concerns which the board of education sought to have assessed appealed. In sustaining the decision of the circuit court, the higher court said, in part: "Every common school in the state, whether it be located in a populous city or in a sparsely settled rural district, is a state institution, protected, controlled, and regulated by the state, and the fact that the state has appointed agencies such as fiscal courts, school trustees, and municipal bodies to aid it in the collection of taxes for the maintenance of these schools does not deprive them of their state character. . . . Therefore, when a municipal body, or a county, or a school district, levies taxes for school purposes, the tax so levied is a state, and not a municipal, county, or district tax, although it be levied and collected by municipal or county or district officers. The fact that the tax is levied and collected for the state by these agencies of the state, appointed for that purpose, does not deprive it of its character as a state tax."

## Authority of the Municipality to Tax School Property

According to the weight of authority the property of the state cannot be taxed by the municipality, neither can special assessments for improvements be levied against property used for state purposes.<sup>8</sup> A Massachusetts case illustrates the position taken by a majority of the courts.<sup>9</sup> This is a proceeding of *certiorari* to squash a municipal assessment which had been levied on the property of the county used for a jail and courthouse. The court, in holding that the city might not collect such an assessment from the county, said:

"The property held by the petitioners is strictly public, paid for from the public funds, managed by the public authorities, devoted to public purposes, and no private person has any rights or authority therein."

"The property of the Commonwealth is exempt from taxation, because, as the sovereign power, it receives the taxation through its officers, or through the municipalities it creates, that it may, from the means thus furnished, discharge the duties and pay the expenses of government. Its property constitutes one of the instrumentalities by which it performs its functions. As every tax would to a certain extent diminish its capacity, we should be unwilling to hold that such property was subject to taxation in any form, unless it were made so by express enactment, or by clear implication. This property . . . is not, indeed, in legal form, the property of the Commonwealth, but the authority by which the county holds it is derived from the statutes by which the duty is imposed upon

the various counties of providing suitable court-houses, jails, and houses of correction."

The courts have almost unanimously held that schools are the agencies of the state, that school property is state property, and that school officers are state officers. Therefore, it would seem to follow that as a general rule school property is exempt from such taxation and special assessment.<sup>10</sup>

It should be pointed out, however, that the courts in a substantial majority of the states permit special assessment of school property for local improvements.<sup>11</sup>

The courts hold that school property, because it is state property, cannot be levied upon, and thus they will not issue executions against the property of school districts.<sup>12</sup> Such was the position taken by the Supreme Court of Missouri.<sup>13</sup> The defendant in this case, Tiedemann, having obtained judgment against the board of education of the city of Cape Girardeau, caused an execution to be levied and issued against the buildings, lands, and furniture of the board. The board then obtained an injunction against the proposed sale under the execution. Upon final hearing the injunction was perpetuated, and Tiedemann sued out this writ of error. The court, in sustaining the injunction, and in holding that school property was not subject to the process of execution, said: "We are all agreed that the beneficial plaintiff is a public corporation . . . and, therefore not subject to the process of execution, at least, so far as any school building or property is concerned."

## Distribution of School Revenue Raised by Taxation

In the exercise of its legislative power, the legislature may grant school districts the authority to tax for educational purposes. It may even require school districts to levy and collect a school tax. In addition, it may go one step further and may stipulate the means and method of distributing the tax money collected by the school districts.<sup>14</sup> This follows from the fact that school taxes are state taxes. The schools belong to the state and the state has the authority to provide for them in any manner that it sees fit. It provides for the levying of a tax to support schools. This tax is a state tax, and in the maintenance of a uniform school system the state may expend it as it sees fit. The state may expend all the money collected from a school district, through school taxes, in that district, or it may put part or all of it in a state fund to be distributed to school districts other than the one in which it was collected. School taxes are state funds to be used for the common good.

Whenever the legislature provides for the distribution of school revenue in such manner that money collected in one school district is expended in other districts, opposition is the result. A significant decision, resulting from such opposition, was handed down by the Supreme

<sup>1</sup>State ex rel. McCausland v. Board of Commissioners of Elk County, 61 Kans. 90, 58 Pac. 959, 47 L. R. A. 67; Atchison, etc., R. Co. v. State, 28 Okla. 94, 113 Pac. 921, 40 L. R. A. (N. S.) 1.

<sup>2</sup>15 L. R. A. (N. S.) 61 (Note); State ex rel. McCausland v. Board of Commissioners of Elk County, 61 Kans. 90, 58 Pac. 959, 47 L. R. A. 67.

<sup>3</sup>Smith v. Robersonville Graded School, 141 N. C. 143, 53 S. E. 524, 8 Ann. Cas. 529; Atchison, etc., R. Co. v. State, 28 Okla. 94, 113 Pac. 921, 40 L. R. A. (N. S.) 1.

<sup>4</sup>State ex rel. McCausland v. Board of Commissioners of Elk County, 61 Kans. 90, 58 Pac. 959, 47 L. R. A. 67.

<sup>5</sup>School District of Hartford et al. v. West Hartford Special School District, 102 Ark. 261, 143 S. W. 895; City of Henderson v. Lambert, 71 Ky. (8 Bush) 607; City of Louisville v. Commonwealth for School Board, 134 Ky. 488; Ramsey v. County Board of Education, 159 Ky. 827, 169 S. W. 521; State of North Dakota, ex rel. Haig v. Haage, 37 N. D. 583, 164 N. W. 289; Atchison, etc., R. Co. v. State, 28 Okla. 94, 113 Pac. 921, 40 L. R. A. (N. S.) 1; Miller v. Childers, 197 Okla. 57; Ford v. School District, 121 Pa. 543; Waterhouse et al. v. Board of President and Directors of the Cleveland Public Schools, and the County of Bradley, 55 Tenn. (8 Heisk.) 857; Richardson v. Liberty Independent School District (Tex.) 22 S. W. (2nd Ser.) 475.

<sup>6</sup>Richardson v. Liberty Independent School District (Tex.) 22 S. W. (2nd Ser.) 475.

<sup>7</sup>City of Louisville et al. v. Board of Education of City of Louisville et al., 154 Ky. 316, 157 S. W. 379.

<sup>8</sup>Inhabitants of Worcester County v. Mayor, etc. of Worcester, 116 Mass. 193, 17 Am. Rep. 159; City of Clinton to Use of Thornton et al., v. Henry County, 115 Mo. 557, 22 S. W. 494, 37 Am. St. Rep. 415; City of Edina to Use of Pioneer Trust Co. v. School District of City of Edina, et al., 305 Mo. 452, 267 S. W. 112; St. Louis Public Schools v. City of St. Louis, 23 Mo. 468; Thogmartin et al. v. Nevada School District, 189 Mo. App. 10, 176 S. W. 473.

<sup>9</sup>Board of Improvements, etc. of the City of Little Rock v. School District of Little Rock (Ark.), 16 L. R. A. 418; City of Edina to Use of Pioneer Trust Co. v. School District of City of Edina, et al., 305 Mo. 452, 267 S. W. 112; St. Louis Public Schools v. City of St. Louis, 23 Mo. 468; Thogmartin et al. v. Nevada School District, 189 Mo. App. 10, 176 S. W. 473.

<sup>10</sup>City of Sioux City v. Independent School District of Sioux City, 55 Iowa 150, 7 N. E. 488; City of Chicago in Trust for Use of Schools v. City of Chicago, 207 Ill. 37, 69 N. E. 580; Dinn v. Board of Education, 202 N. Y. S. 62.

<sup>11</sup>Newt Olson Lumber Co. v. School District No. 8 in Jefferson County (Colo.), 263 Pac. 723; The State to the Use of the Board of Education v. Tiedemann, 69 Mo. 306; Morgantown Hardware Co. v. Morgantown Graded School, 150 N. C. 680, 64 S. E. 764, 134 A. S. R. 963, 17 Ann. Cas. 130.

<sup>12</sup>The State to the Use of the Board of Education v. Tiedemann, 69 Mo. 306.

<sup>13</sup>Mitchell v. Lowden, 286 Ill. 327, 123 N. E. 566; Perry School v. Township, 162 Ind. 310, 70 N. E. 246; Boggs v. School Township of Cass, Guthrie County, 128 Iowa 15; Sawyer v. Gilmore, 109 Me. 169, 83 Atl. 673; State v. Taylor, 33 N. D. 76; Miller v. Korns, 107 Ohio St. 287, 140 N. E. 773.

Court of Maine.<sup>15</sup> The legislature of the State of Maine passed an act providing for a general tax assessment of  $1\frac{1}{2}$  mills on all property of the state for the purpose of aiding common schools. The proceeds of this tax were to be distributed to the various cities, towns, and plantations on the basis of school census and wealth. Although part of the tax was raised in the townships, none of it was to be distributed to these subdivisions of the state. This suit was brought to enjoin the collection of the tax on the ground that it violated the following provision of the Constitution: "All taxes upon real or personal estates assessed by authority of this state shall be apportioned and assessed equally according to the just value thereof." The court, in holding that the method of distributing the school funds did not violate the constitution, said:

"Objections, however, are raised to the manner of distribution, and the plaintiff contends that in considering the constitutionality of a statute creating revenue by taxation the method of distribution as well as of assessment should be scrutinized.

"The first objection is that this act imposes an unequal burden of taxation upon the unorganized townships of the state, because, while the fund is created by the taxation of all the property in such townships, as well as upon the property in the cities, towns, and plantations, no provision is made for the distribution of any part thereof to such townships, but it is all apportioned among the cities, towns, and plantations. The townships are omitted. In other words, while four subdivisions of the state are made to contribute to the fund, only three are permitted to share in the financial benefits.

#### Not Unequal Burden

"This objection, however, is without legal foundation. The Legislature has the right under the Constitution to impose an equal rate of taxation upon all the property in the state, including the property in unorganized townships, for the purpose of distributing the proceeds thereof among the cities, towns, and plantations for common-school purposes, and the mere fact that the tax is assessed upon the property in four municipal subdivisions and distributed among three is not in itself fatal. . . . The fundamental question is this: Is the purpose for which the tax is assessed a public purpose, not whether any portion of it may find its way back again to the pocket of the taxpayer or to the direct advantage of himself or family. Were the latter the test, the childless man would be exempt from the support of schools and the sane and well from the support of hospitals. In order that taxation may be equal and uniform in the constitutional sense, it is not necessary that the benefits arising therefrom should be enjoyed by all the people in equal degree, nor that each one of the people should participate in each particular benefit. Laws must be general in their character, and the benefits must affect different people differently. This is due to difference in situation. . . . But the law recognizes a broader and more unselfish test than this. In a Republic like ours each must contribute for the common good, and the benefits are received not directly in dollars and cents, but indirectly in a wider diffusion of knowledge, in better homes, saner laws, more efficient administration of justice, higher social order, and deeper civic righteousness. . . .

"Inequality of assessment is necessarily fatal, inequality of distribution is not, provided the purpose be the public welfare. The method of distributing the proceeds of such a tax rests in the wise discretion and sound judgment of the Legislature. If this discretion is unwisely exercised, the remedy is with the people, and not with the court. Such distribution might be ac-

cording to population, or according to the number of scholars of school age, or according to school attendance, or according to valuation, or partly on one basis and partly on another."

A similar case arose in Ohio.<sup>16</sup> The Legislature of that state passed an act providing that a tax of 2.65 mills should be levied annually upon all property of the state, for school purposes. The proceeds of this tax were to be retained by the counties in which they were collected. Each city school district and each exempted village school district was to receive the full amount raised by this tax within its own corporate limits. The amounts collected from outside such city and exempted village school districts were to be apportioned to each district in the county outside the exempted districts upon the basis of the number of teachers employed, the cost of transporting pupils, and daily attendance. This action was brought to enjoin the enforcement of such levy on the ground that it was unconstitutional because it violated that section of the constitution which provided for uniformity of taxation. It was also contended that the act was unconstitutional because it provided for the expenditure of school funds for a purpose foreign to that of the district in which they were collected. The court refused to enjoin the tax levy saying:

"Taking these objections in their order, we will first inquire whether the law is unconstitutional on the ground that it violates section 2, art. 12 of the Constitution of Ohio, the pertinent portion of which reads: 'Laws shall be passed, taxing by a uniform rule. . . .'

"In this case the tax in question is actually levied upon every school district in the state. Section 7575, General Code, provides that —

"There shall be levied annually a tax of fifteenth [fifteen] hundredths of one mill on the grand list of the taxable property of the state . . . and an additional tax of two and sixty-five hundredths mills. . . ."

"It is the plaintiff's contention, however, that this levy, as a matter of fact, is not made in city school districts and in exempted village school districts, because the full amount of the proceeds of the levy within these districts is received by these very districts after the levy has been made, while other school districts in the county receive an apportionment of the balance of the levy within the county in varying amounts, according to their school expenses and attendance of pupils.

"Plaintiff therefore claims that although the levy is made in every school district within the state, since the proceeds of the levy are at once appropriated to the city and exempted village school districts, and are apportioned to other school districts in each county only after this first appropriation to the city and exempted village school districts, as to certain school districts, it is a levy in form only, and not in fact — that the levy actually falls upon such districts as Silver Lake village school district, and not upon city or exempted village school districts. Plaintiff therefore claims that the law does not tax by a uniform rule. . . .

"Since the tax, however, actually falls upon each school district in the state, the levy itself is uniform whatever may be said of the distribution. There is considerable authority to the effect that so long as a tax is uniformly laid the Legislature may appropriate the proceeds of that tax by a rule that is not uniform, in case the appropriation is reasonable and made in pursuance of a valid and legitimate state purpose.

"Plaintiff next contends that as the money raised in Silver Lake village school district is taken out of that district and used in other school districts in Summit County, it is employed for a purpose foreign to the school

district of Silver Lake village, and hence for a purpose which is not legitimate in taxation.

"Section 2, art. 6, of the Ohio Constitution, provides as follows: 'The General Assembly shall make such provisions, by taxation, or otherwise, as with the income arising from the school trust fund, *will secure a thorough and efficient system of common schools throughout the state. . . .*'

"A thorough system could not mean one in which part or any number of the school districts of the state were starved for funds. An efficient system could not mean one in which part or any number of the school districts of the state lacked teachers, buildings, or equipment.

"In the attainment of the purpose of establishing an efficient and thorough system of schools throughout the state, it was easily conceivable that the greatest expense might arise in the poorest districts; that portions of great cities, teeming with life, would be able to contribute relatively little in taxes for the support of schools, which are the main hope for enlightening these districts, while districts underpopulated with children might represent such taxation value that their school needs would be relatively oversupplied. . . .

"The fact that this money is appropriated, not for a local purpose, but for a legitimate state purpose, disposes of the plaintiff's contention that the law takes property without due process, and also disposes of his contention that because the tax is spent outside of his district he is denied the equal protection of the laws. He receives the equal protection of the laws when he is taxed for a legitimate state purpose by a tax which is levied equally upon every district in the state."

#### A State Function

To summarize: Education is a function of the state. Therefore, the courts are agreed that the Legislature has the power to grant to school districts the authority to levy and collect taxes for school purposes. It has also been held that the Legislature may go one step beyond this and may compel a school district to levy and collect a tax for school purposes without the consent of those who are to be taxed.

The courts are generally agreed that school taxes are not local or municipal taxes in any sense of the word but that they are state taxes. They are taxes paid for the purpose of providing funds for the execution of a state function.

Because of the relationship of education to the state, some courts hold that the municipality cannot tax school property; neither can a special assessment for local improvements be levied against property belonging to the school district. This follows from the fact that the state, in creating municipalities, cannot be presumed to have granted them the implied power of taxing state property. The courts hold that the principle of uniformity of taxation is not violated when the state levies a state-wide school tax and distributes it in such a way as to maintain a uniform school system. Since education is a matter of state rather than of local concern, taxes raised in one school district may be used to support schools in other districts.

#### DEATH OF SUPERINTENDENT DRAKE

Ellis H. Drake, superintendent of schools at Kalamazoo, Mich., since 1915, died at his home on May 31, after a lingering illness.

Mr. Drake, who was born in Cincinnati, Ohio, later moved to Indiana, where he received his education. He was a graduate of the Kentland High School, Indiana Normal School, and Chicago and Indiana Universities. He completed his graduate work at the University of Indiana and Columbia University, receiving his degrees from both institutions.

Mr. Drake had filled the positions of principal, assistant superintendent, and superintendent in a number of Indiana cities, before going to Kalamazoo. He had been superintendent at Kalamazoo for the past eighteen years.

He was an active member of the National Education Association and was a past president of the Michigan Schoolmasters' Club.

<sup>15</sup>Sawyer v. Gilmore, 109 Me. 169, 83 Atl. 673.

<sup>16</sup>Miller v. Korns, 107 Ohio St. 287, 140 N. E. 775.

# CHECK LIST for Determining Possible Economies in Public-School Administration

*H. H. Linn, Assistant Superintendent in Charge of Business, Muskegon, Michigan*

Economy in governmental expenditures is a watchword of 1933. True economy should be practiced during periods of prosperity, as well as during periods of depression, but it is quite natural that governmental costs should be scrutinized with even greater care when general economic conditions are not favorable. While there is little foundation for general charges to the effect that the public schools have been, and are being, administered in a grossly wasteful manner, it must be admitted that, because of the complexity and political control of the schools throughout the country, there is some waste and some extravagance.

There is every reason to believe that the public schools will be compelled to operate during the forthcoming year on reduced budgets. School officials must make many decisions regarding essentials and nonessentials in laying out programs for retrenchment. They must study every potential source of economy in order to assure themselves that the reduced receipts will be used to the best advantage. First things must come first, and sheer waste and extravagance must be avoided.

As an aid to those who desire to scrutinize the activities of their local school systems for the purpose of ferreting out possible sources of financial waste, the writer has prepared a check list for use in determining possible economies in school administration. The list, as prepared, contains many suggestions for effecting economies, the value of which is more or less evident. The writer has also prepared a volume on *Practical School Economics*, published by the Bureau of Publications, Teachers College, Columbia University,<sup>1</sup> which discusses much more in detail the many problems suggested by questions in the check list. It points out many hundreds of practical economies that may be effected. In a sense, the check list is supplementary to this more extended discussion.

## THE CHECK LIST

The questions in this check list have been worded so that an affirmative (Yes) answer indicates desirable practice. If a question is answered "No," an investigation should be made to determine whether or not further economy or efficiency may be attained through a modification of present practice. Questions that do not apply to a particular school system may be marked "X" to indicate this fact.

### BUSINESS-ADMINISTRATION PROCEDURES

#### Accounting

- 1.. Does the accounting system used by the school reveal the source of every dollar received and the cause for the expenditure of every dollar?
- 2.. Is an adequate, complete, and proper system of accounting employed?
- 3.. Is an adequate inventory of property, equipment, and supplies maintained?
- 4.. Are the minutes of the board of education complete and properly maintained?

#### Budgetary Procedure

- 1.. Are the school finances controlled by definite budgetary procedure?
- 2.. Is the financial budget a detailed statement of anticipated receipts and expenditures rather than a brief superficial document?
- 3.. Does the annual budget compare items for the new year with those of preceding years?
- 4.. Are the subdivisions of the budget properly proportioned?
- 5.. Are the school officials required to carry on the school activities in accordance with the budget allotments?

<sup>1</sup>Will be ready for distribution in June, 1933.

- 6.. Is the public encouraged to participate in the planning of the budget?
- 7.. Is the preparation of the budget delegated to the superintendent of schools and his staff, rather than to school-board members?
- 8.. Are monthly statements of budgetary receipts and expenditures submitted to the board?
- 9.. Is a systematic check of expenditures, outstanding orders, and obligations made at least monthly and compared with appropriations to show unencumbered balances under each heading of the budget?
- 10.. Is some degree of elasticity permitted in carrying out the provisions of the budget, with limited and controlled approval by the board?
- 11.. Do the state laws favor and require the preparation of a detailed financial budget and keeping within the provisions of the approved budget?
- 12.. Is the budget used as an instrument of economical and efficient administration, rather than as meeting a technical legal requirement?
- 13.. Is an annual report of receipts and expenditures submitted to the board of education and to the public at large, either through printed reports, or through newspaper publicity?
- 14.. Are all financial records and documents written in permanent ink?
- 15.. Are duplicate copies kept of all contracts, orders, and correspondence relating to financial transactions?
- 16.. Are dual positions avoided that allow an individual receiving cash to keep the accounts against which the cash account must be checked?
- 17.. Are all bills and claims checked and audited before payment is made?
- 18.. Are financial records and documents, including canceled checks, notes, bonds, coupons, etc., kept in a fireproof vault?
- 19.. Is money collected in schools kept in a safe or vault?
- 20.. Is money collected in schools deposited in a bank as soon as reasonably possible, after collection, so that only a minimum amount of available cash is kept on hand?
- 21.. Are various types of mechanical devices provided to effect economy and efficiency in office routine?

### SELECTION, PURCHASE, DISTRIBUTION, AND UTILIZATION OF SUPPLIES

#### Selection of Supplies

- 1.. Have definite purchasing specifications been set up for each supply item that is used in any considerable amount?
- 2.. Are supplies purchased in accordance with the specifications set up?
- 3.. Has the selection of supplies been simplified by reducing the brands, qualities, sizes, or designs to the smallest number consistent with successful operation?
- 4.. Are supplies purchased by their true names, rather than on the basis of brand names?
- 5.. Are specifications formulated by the Federal Specifications Board used in selecting and purchasing school supplies?
- 6.. Is the information made available by Consumers' Research or other research agencies used in making selections of certain types of supplies?
- 7.. Are supplies selected on the basis of tested or analyzed samples?
- 8.. Are the supplies selected "Certified" by the manufacturers, or distributors, to meet specified standard requirements?
- 9.. Do members of the school staff directly concerned advise in the selection of supplies?
- 10.. Is a minimum quality selected that meets the needs (neither inferior nor superior)?

#### Purchasing of Supplies

- 1.. Is responsibility and authority for purchasing centralized with a single individual or purchasing department?
- 2.. Has the possibility of purchasing supplies more economically by coöperating with other school systems and pooling purchasing requirements been investigated?
- 3.. Has the possibility of purchasing certain items in coöperation with other local municipal departments been investigated?
- 4.. Are supplies purchased in quantities that permit lower prices?
- 5.. Are supplies purchased in containers or packages that permit lower prices?
- 6.. Are supplies and equipment purchased on the basis of competitive bids?
- 7.. Are a sufficient number of vendors invited to bid on material requirements so that competition is stimulated?
- 8.. Are the supplies purchased "out-of-town" if local dealers cannot meet the outside competition, or do not render a service commensurate with their higher bids?
- 9.. Are school-board members, school officials, or school employees excluded from bidding?
- 10.. Are supplies purchased at the time of year when lowest prices may be secured?
- 11.. Are prices on materials and equipment checked with current quotations?
- 12.. Do the purchasing agents study market trends to aid them in determining the proper time for ordering certain types of supplies?
- 13.. Is advantage taken of real bargains that are occasionally offered?
- 14.. Is full advantage taken of trade and cash discounts?
- 15.. Are receipts of supplies and equipment checked with orders and compared with specifications?
- 16.. Are certain types of used material or secondhand equipment purchased when they meet the needs adequately?

#### Auditing of Accounts

- 1.. Are the financial accounts audited by professional auditors (either certified public accountants or state auditors) at least once a year? (A biennial audit may be sufficient for the smaller school systems.)
- 2.. Do the reports of the auditors contain suggestions calling for modifications in practice that will promote greater economy and efficiency?
- 3.. Are the findings of the audit published?

#### Bonding Officials

- 1.. Are all school officials responsible for the care and custody of school funds (tax collector, treasurer, bookkeeper, business manager, certain clerks, etc.), who through dishonesty or mismanagement might cause a loss of school funds, placed under bond?
- 2.. If so, are the bonds adequate in amount to provide a proper degree of security for the funds?
- 3.. Are corporate surety bonds provided in place of personal bonds, for bonding the officials and employees?

#### Safeguarding School Funds

- 1.. Are the banks required to furnish full security for school deposits?
- 2.. If so, are corporate depository bonds or high-grade collateral, rather than personal bonds, accepted as security for the deposits?
- 3.. If corporate depository bonds are furnished as security, are the surety companies investigated to determine whether or not they are financially sound or acceptable as sureties?
- 4.. Are school depositories selected on the basis of criteria for determining their relative soundness?
- 5.. Is it a practice to keep the amount of funds on deposit at as low a figure as is reasonably possible?
- 6.. Are sinking funds invested in high-grade securities (federal, state, county, municipal, or school bonds or other evidences of indebtedness), rather than carried as bank accounts?
- 7.. If securities are owned, are they kept in a bank safety-deposit box?

#### Publicity

- 1.. Are the acts of the board of education and school officials involving financial transactions given adequate publicity through local newspapers?
- 2.. Is the general public encouraged to attend school-board meetings and listen to discussions of public interest?

#### Desirable Office Practices

- 1.. Is "safety" paper used for writing school checks?
- 2.. Is a check protector used in writing checks?
- 3.. Are at least two authorized signatures required for negotiable instruments, such as checks, notes, bonds, etc.?
- 4.. Are authorized signatures affixed to negotiable instruments only at the time the amount of the transaction is filled in?
- 5.. Is the payroll procedure such that,
  - a) .. No duplication of payments can be made?
  - b) .. Payrolls cannot be easily padded?
  - c) .. Proper deductions may be made for absence?
- 6.. Are written receipts issued for all incoming monies?

17.. Is advantage taken of the opportunity to buy suitable supplies and equipment at bankrupt sales?  
 18.. Are substitute supplies purchased at lower prices when they adequately meet the needs, without lowering the efficiency of results?

#### Distribution and Utilization of Supplies

1.. Are the more commonly used school supplies furnished to pupils free without direct cost to them?  
 2.. Is an adequate amount of supplies provided so that the scholastic work does not suffer as a result of insufficient supplies?  
 3.. Are standards of consumption in the use of supplies established and are the supplies allotted to pupils in accordance with the standards?  
 4.. Are pupils instructed in the economical use of supplies allotted to them?  
 5.. Are custodians and other employees instructed in the economical and efficient use of supplies allotted to their departments?  
 6.. Are periodic inspections made of storerooms and supply cabinets to ascertain how the supply stocks are maintained?  
 7.. Are inventories and stock records maintained to show how supplies are received and distributed?  
 8.. Are supplies distributed in such amounts that teachers and pupils are encouraged to be economical and careful in their use?  
 9.. Are pupils permitted to use both sides of the paper for much of their writing?  
 10.. Are cheaper grades of paper used for certain types of practice work (such as print paper or second sheets for some arithmetic work)?  
 11.. Are paper supplies purchased in different sizes so that pupils may use the size sheet that will be most economical for particular types of work?  
 12.. Is cheap ink made from ink powder used for certain general writing purposes?  
 13.. Are heavy-inked typewriter ribbons purchased for general practice use in commercial departments?  
 14.. Do the industrial-arts departments (such as electrical, sheet metal, and auto mechanics) make use of salvaged materials which may be picked up at a low cost for certain types of school practice work?  
 15.. Has the cost of laboratory supplies been reduced by having the instructors give more demonstration work in place of having the pupils work out individual experiments, without reducing educational efficiency?

#### CONTROL OF INCOME

1.. Is there an adequate and accurate check on all sources of income to indicate payment of the following:  
 a).. Levied taxes?  
 b).. Delinquent taxes?  
 c).. Interest on delinquent taxes?  
 d).. Penalties on delinquent taxes?  
 e).. Interest on bank balances?  
 f).. Interest on sinking funds?  
 g).. Interest on securities held?  
 h).. Tuition from other school districts?  
 i).. Tuition from parents or guardians of pupils?  
 j).. Various forms of state and federal aid?  
 k).. Rents?  
 l).. Sales of property, equipment, books, and supplies?  
 m).. Refunds from insurance adjustments?  
 n).. Fees of various kinds (lockers, laboratory, etc.)?  
 o).. Receipts from nonacademic activities (bookstores, lunchrooms, etc.)?  
 p).. Fines and penalties?

#### Taxation

1.. Have the board-of-education or school officials taken any interest in the matter of property assessments for taxation purposes, and have they made any effort to have obvious inequalities corrected?  
 2.. Has any effort been made to investigate the records of the tax-collecting officials, to ascertain how effective and efficient they are in collecting school taxes?  
 3.. Is the cost of collecting school taxes held to a reasonable minimum?  
 4.. Are school taxes paid over to the proper public officials for school use promptly at reasonable intervals of time?  
 5.. Are delinquent school taxes allocated and delivered to the proper officials promptly when paid?  
 6.. Are the penalties and interest on delinquent school taxes credited to the school district?  
 7.. Have all sources of income been checked to make certain that other governmental divisions are not illegally receiving or diverting monies intended for school purposes?

#### Tuition

1.. Is the school district prompt in collecting tuition money due from patrons, school districts, or counties?  
 2.. Do the school officials make sure that liability for tuition is established before nonresident pupils are accepted?  
 3.. Are accurate records maintained to show residence status of pupils and attendance of nonresidents?

4.. Is the tuition rate charged sufficiently high to pay for the cost of instructing nonresident pupils?

#### Interest on Funds

1.. Are banks required to bid for the privilege of carrying school deposits, thus assuring the highest rate of interest consistent with safety?  
 2.. Are bank deposits divided into demand and time deposits to secure better interest rates?  
 3.. Does the district receive all interest due on bank balances?  
 4.. If a sinking fund is maintained, is the money invested in selected high-grade securities that mature a short time before the funds will be needed?  
 5.. Is interest collected promptly on securities owned by the school district?

#### Subventions

1.. Does the school district receive all state and federal aid due it?  
 2.. If state subventions are based on census reports, is an accurate census taken so that the local district receives all income to which it is rightly entitled?  
 3.. Has the possibility been considered of securing a greater amount of state or federal aid by arranging some reasonable and economical modification in the academic program?

#### Miscellaneous Income

1.. Is all possible revenue obtained from rentable school property?  
 2.. Does the school district receive all fines and license money due it according to law?  
 3.. Are the fees charged pupils (for lockers, laboratory fees, etc.) promptly collected?  
 4.. Are refunds collected when insurance rates and amounts are adjusted?  
 5.. Does the school district dispose of property which it wishes to sell in a businesslike manner, and are payments collected promptly?  
 6.. When pupils are charged for supplies or equipment, are payments collected promptly?  
 7.. Are all nonacademic funds properly accounted for?

#### GENERAL CONTROL

##### Personnel

1.. Is it a policy of the board to employ an experienced and professionally trained superintendent of schools at a reasonable salary commensurate with the value of his service?  
 2.. Are administrative assistants employed to assist the superintendent, if the school system is sufficiently large to warrant the additional positions?  
 3.. If a business manager is employed,  
   a).. Has he had professional training for his position?  
   b).. Has he had previous experience in educational work so that he is acquainted with school problems?  
 4.. Do the schools maintain a research department to study means of improving the efficiency of various types of related school activities with resulting economy?  
 5.. Are office assistants employed to handle details and routine matters so that the more highly paid professionally trained individuals may spend their time and energy with more important matters?  
 6.. Are the salaries of office assistants held within reasonable limits, consistent with the value of the services of these positions?  
 7.. Are no more assistants employed than are necessary to handle efficiently all the work of their departments?  
 8.. Are part-time clerks and assistants employed when their full-time services are not required?  
 9.. Is extra help employed at peak periods, thus avoiding the employment of individuals for full time when this cannot be justified?  
 10.. Are some of the more capable high-school students permitted to render some office assistance when the educational returns justify this practice?  
 11.. Are the administrative positions, in general, consolidated to a degree that is consistent with both efficiency and economy?  
 12.. Do the school-board members serve without pay?

##### Miscellaneous Expenses of General Control

1.. Are officials for school elections paid only to the extent that their duties warrant?  
 2.. Are other costs of elections, such as printing, advertising, rentals, etc., held to a minimum, consistent with effectiveness?  
 3.. Has the possibility been considered of combining school elections with other governmental elections, thus reducing costs, but without bringing the schools into "politics" and sacrificing efficiency of control?  
 4.. Is the school census being taken at a proper cost at present? (Note: *Where the distribution of state or other funds is based on school census it is essential that an accurate census be taken even if the costs are slightly higher.*)  
 5.. Are long-distance calls made and telegrams sent only when letter writing will not serve the purpose?  
 6.. Is an accurate record kept of all telegrams sent and telephone calls made so that no private messages are paid for out of school funds?

7.. Are report cards and circulars concerning school events sent home by the pupils, thus saving postage?  
 8.. If traveling expenses are allowed school officials or employees, are they required to make a notarized statement of expenses, or to show receipts when presenting their bills?  
 9.. If school officials are provided with automobile transportation, has a study been made to determine whether it is more economical to provide school-owned cars, or to pay officials a definite allowance for the use of their personal cars?  
 10.. Is the system of records and reports as simplified as it might be without losing effectiveness?  
 11.. Has the cost of printed forms and reports been reduced by adopting a limited number of standardized sizes?  
 12.. Has the number of different forms and reports been reduced by combinations, or by eliminating those of doubtful importance?  
 13.. Are the memberships of school officials in local, state, or national associations paid out of their personal funds, rather than out of the public-school funds?  
 14.. Are premiums for surety bonds held to a minimum, by keeping the amounts of the bonds to a reasonable point consistent with safety?

#### INSTRUCTIONAL SERVICE

##### Personnel and Salaries

1.. Are fewer principals being employed by placing one principal in charge of two or more small schools, rather than a principal for each school?  
 2.. In the smaller school systems, does the superintendent also serve as high-school principal?  
 3.. Is sufficient clerical service provided the principals so that they can give more time and attention to the more important duties connected with their offices?  
 4.. Are teachers provided with clerical assistance to look after details and routine matters, thus permitting them to assume additional professional duties and responsibilities?  
 5.. Has the supervisory staff been reorganized to give greater efficiency in supervision?  
 6.. Have any special supervisory positions carried over largely by tradition been eliminated if this could be done without reducing the efficiency of instruction?  
 7.. Have all teachers known to be inefficient and unfit for service been dismissed?  
 8.. Is it the policy of the board of education to employ well-trained teachers at a reasonable salary, rather than to select teachers on the basis of low salary, without respect to proper training and experience?  
 9.. Are teachers selected on the basis of special training for the positions to be filled?  
 10.. Are teachers in the nondepartmentalized grades prepared to handle penmanship, art, music, and physical training so that special teachers are not required for these subjects?  
 11.. Are teachers employed on a part-time basis when their full-time services are not required?  
 12.. Are teachers employed on a substitute basis, if local conditions are such that enrollment fluctuates at different seasons of the year, thus permitting greater flexibility in arranging teaching personnel?  
 13.. Can a reduction in the teachers' salary schedule be justified, in view of changes in the cost of living?  
 14.. Are reasonable sick-leave provisions made to protect the health of pupils and teachers and at the same time to preserve the efficiency of instruction?  
 15.. Are sick-leave privileges safeguarded so that teachers do not abuse the privileges, causing a needless expenditures of public funds for substitute services?  
 16.. When teaching vacancies occur, is it a policy to employ at least a few relatively inexperienced but well-prepared teachers, at the lower range of the salary schedule?  
 17.. Are substitute teachers employed at substitute salaries, to fill regular positions opening during the year?

##### School Organization

1.. If a homeroom organization is in operation in the high school, is this plan of organization so arranged that maximum economy in administration is obtained?  
 2.. Has departmentalization or the adoption of the platoon type of organization been considered as a means of reducing school costs, consistent with the maintenance of effective instruction?  
 3.. Has the opportunity to save money by operating summer schools been fully investigated?  
 4.. Have the possible advantages of the all-year school been fully investigated?  
 5.. May the length of recitation periods be shortened, or the number of recitations per week reduced, without lowering the efficiency of results?  
 6.. If the semiannual promotion plan is maintained, is there evidence that the plan is being operated economically and with efficient results sufficient to warrant its retention?

(Continued on Page 62)



JAMES FORD RHODES JUNIOR-SENIOR HIGH SCHOOL, CLEVELAND, OHIO  
George M. Hopkinson, Architect, New York City

## The James Ford Rhodes *Junior-Senior High School* Cleveland, Ohio

**George M. Hopkinson, Formerly Architect, Cleveland Board of Education**

The James Ford Rhodes Junior-Senior High-School Building, located in the South Brooklyn district of the city of Cleveland, was completed and opened in February, 1932. As the title implies, the school was designed as a six-year school for junior- and senior-high-school pupils, as this type of building, it was believed, would best meet the needs of the district for many years.

The educational needs imposed the requirement that the first unit be erected to accommodate 1,400 pupils, and that the building be constructed to allow for a future addition, so that the ultimate pupil capacity would be 2,500. The further restriction, that the auditorium be omitted from the first building unit, was made.

These basic requirements made the problem, while complicated, a most interesting one from a planning point of view, and should be of particular interest to others where similar restrictions and future housing requirements are imposed.

The complications were brought about by the fact that it was necessary to include in the first unit parts of educational units that at some future time would have to be extended into the future addition as complete educational units without it being necessary to make a lot of expensive alterations in the first structure. This is particularly important in connection with laboratories, shops, and similar educational features where structural changes or the splitting of the physical requirements for an activity would prove a serious matter. The problem, however, was solved so that the proper requirements have been furnished in the first structure, to which any addition can be made without the drawbacks mentioned, with the result that the completed whole will provide a successful plant, meeting all ultimate educational needs.

The following are cited as examples of the difficulties which had to be overcome from a

physical point of view, but which it was possible, through careful planning, to solve:

A biology lecture room was not required immediately but would be in the future. This had to be taken into consideration in assigning the use of the space adjoining the science department as laid out, and the same provision applied to a future general-science room that would be required later.

One mill and bench shop required at once had to have the proper relation to two separate

bench shops and an additional millroom required in the future, and the same problem occurred in connection with the requirement for an additional domestic-science room.

The sewing and art rooms will be increased in number in the future, and the ultimate plan had to make provision for them without splitting the activity.

Plumbing and mechanical work where locations of activities have to be converted were inserted for future use during the construction



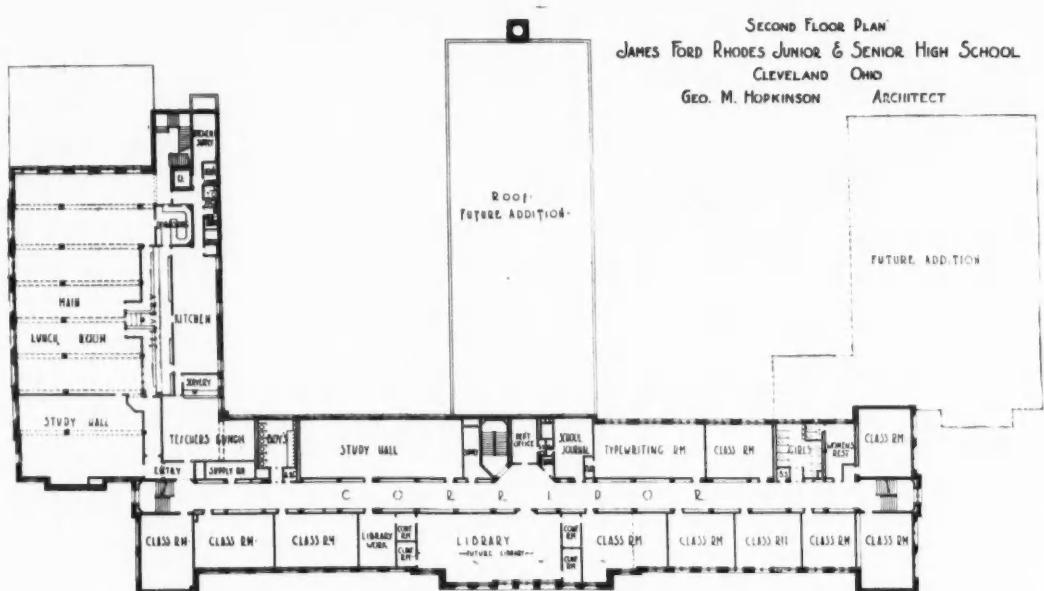
SCIENCE ROOM, JAMES FORD RHODES JUNIOR-SENIOR HIGH SCHOOL, CLEVELAND, OHIO  
George M. Hopkinson, Architect, New York City

<sup>1</sup>W. L. Stoddart and G. M. Hopkinson, Associate Architects, New York City.



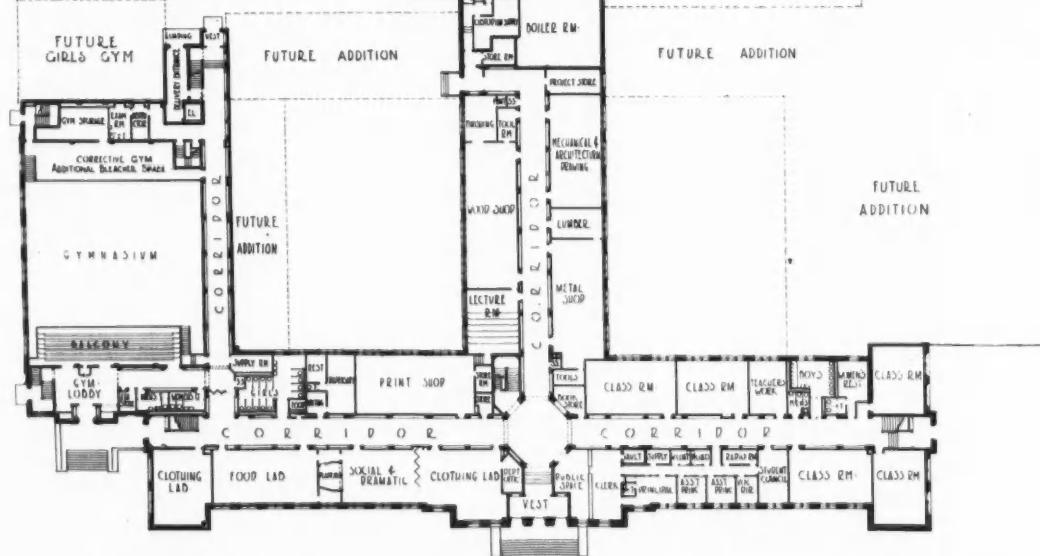
PRINT SHOP, JAMES FORD RHODES JUNIOR-SENIOR HIGH SCHOOL, CLEVELAND, OHIO  
George M. Hopkinson, Architect, New York City

PRINT SHOP, JAMES FORD RHODES JUNIOR-SENIOR HIGH SCHOOL  
George M. Hopkinson, Architect, New York City



FIRST FLOOR PLAN  
JAMES FORD RHODES JUNIOR & SENIOR HIGH SCHOOL  
CLEVELAND OHIO  
Geo. M. HOPKINSON, ARCHITECT

GEO. M. HOPKINSON ARCHITECT



FLOOR PLANS OF THE JAMES FORD RHODES JUNIOR-SENIOR HIGH SCHOOL, CLEVELAND, OHIO  
George M. Hopkinson, Architect, New York City

of the first structure, which will save considerable expense in the future and should not be overlooked, as this is an important matter in designing buildings with a future addition contemplated.

The ultimate rectangular, block-shaped building, with auditorium and gymnasium units at the extreme ends, was determined upon after careful consideration of all the various forms that might be applicable to this structure, educational administration, to a great extent, influencing the decision. With the ultimate plan in mind for 2,500 capacity, necessitating a three-story structure along the front, with a three-story center stem wing and two end wings, it was found that the requirements for the 1,400-capacity first unit could be accommodated in the three-story front portion, with a one-story center stem rear wing, and one end wing accommodating the gymnasium and cafeteria.

The first floor contains all the shop units, the administrative unit, student-council room, clothing and food laboratories, social and dramatic unit and study. The second floor provides for the library suite, study halls and classrooms. The third-floor layout provides for science units, such as biology, physics, chemistry, and in addition, art rooms and chorus room. Above the third floor, in the center of the building, is a large room for band purposes and a roof conservatory.

A special study was made of various types of architectural treatment for the exterior, with a view to giving consideration to the expense involved in designing the building of various styles of architecture to forestall critics who have no esthetic point of view and who make claims that money is squandered in architectural treatment in the designing of school buildings.

Three levels of relative cost of different types of architecture were developed and estimated as follows:

First: The commercial, factory or box type.

Second: A group of architectural designs in true form with the necessary amount of treatment and form to place them in the same cost class; these included modern, colonial, and modernized Italian renaissance.

Third: A class with considerable additional architectural treatment and detail, such as elaborate Georgian, etc.

After considering the estimated differential in cost it was determined to use the modernized Italian renaissance listed in the second class, due first to the small additional cost over the first class, and due to the further fact that this style had not heretofore been applied to schools and was suitable for the surroundings in the district under consideration.

The first unit of the building for 1,400-pupil capacity contains eighteen classrooms varying in size from 25- to 45-pupil capacity. This number will be increased to 35 various-sized classrooms in the completed building.

One typewriting room (certain classrooms will also be used for commercial work) equipped with 50 typewriting stands and bentwood chairs, is provided on the second floor.

The science department on the third floor provides for biology, physics, general science, and chemistry.

located in the adjoining supply room. The physics laboratory is equipped with 17 double physics tables, apparatus cases and storage cupboards.

The science darkroom, motor generator and battery room, and the necessary storerooms are also provided.

The general-science room is equipped with 21 general-science tables, and aquarium, together with instructor's desk, and projection screen.



LIBRARY, JAMES FORD RHODES JUNIOR-SENIOR HIGH SCHOOL, CLEVELAND, OHIO  
George M. Hopkinson, Architect, New York City

The chemistry rooms contain "Lincoln" type student science desks for 32 pupils.

The boys' shop unit consists of one combined millroom and bench shop for woodworking and simple mechanics, equipped with 32 manual-training benches, the usual lathes, saws, sanding machines, and glue benches. All machines are connected to the dust-collecting system which automatically carries all dust and shavings to a room adjoining the boiler room. A finishing room and separate toolroom adjoin the millroom.

The separate metal-working shop contains 8 machine benches, stake bench, grinder, drill press, lathe, forge, and gas smelting furnace.

The printshop is equipped with 32 typesetting stands, presses, and imposing table, and necessary wire stitchers, type cabinets, and job cases.

The mechanical-drawing room and a lecture room adjoin the shop unit.

The Girls' shop unit comprises one domestic-science room, two sewing rooms, and a dramatic and social room. The domestic-science room contains 18 domestic-science tables and 8 separate gas ranges. One sewing room contains 8 sewing tables and 8 various type sewing machines. Fitting rooms, mirrors, display cabinets, ironing boards, and cutting tables complete the suite.

The music department has a chorus room seating 120, and a band and music-appreciation room for 60 pupils.

The two study halls each seat 125 pupils and the library accommodates 80 at a time with provision for extension to 130-pupil capacity.

The cafeteria located on the second floor has a seating capacity of 340, which will eventually be increased to 620. The lunch counter is separated from the seating portion by a glass partition, which allows the room to be used as a study hall between lunch periods. A separate teacher's lunchroom adjoins the main cafeteria.

The gymnasium serves also as an auditorium

and has a seating capacity of 1,000 arranged by means of movable seating in addition to the bleacher seating. A temporary movable stage has been made available. A complete radio-and-public-address system has been installed.

There are also the usual auxiliary, utility, and storage rooms throughout the building.

Locker- and shower-room facilities are found at each side of the gymnasium under the bleacher balconies.

The corridors are provided with wall lockers sufficient for all pupils in the building and eliminate the use of wardrobes in classrooms.

The heating plant consists of two horizontal-return tubular boilers with automatic underfeed stokers, furnishing steam to a unit-heater system of heating and ventilating. This system of heating and ventilating is of a type new to the State of Ohio since it differs from the conventional type of so many air changes per hour as

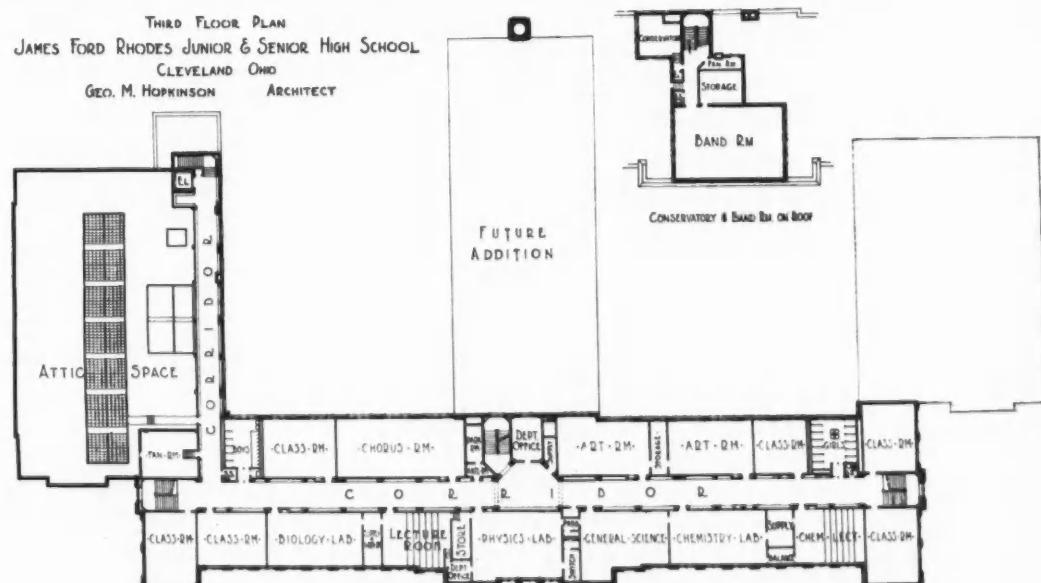
required by the state, and ventilates upon the principle of temperature change within the room. The system is known as the thermal system and depends chiefly upon air motion to give comfort and air conditions required.

Several thousands of dollars were saved in capital outlay in installing this system as an experiment to see if the cost of heating and ventilating school buildings could be materially reduced.

The building is equipped with the latest mechanical devices, such as vacuum-cleaner system, automatic clocks, intercommunicating telephones, and a complete installation of radio and public-address loud-speakers and microphones.

All ceilings are acoustically treated, including all class and recitation rooms throughout the building. The results in applying the acoustical

(Concluded on Page 62)





ROCHAMBEAU ELEMENTARY SCHOOL, WHITE PLAINS, NEW YORK  
Starrett and Van Vleck, Architects, New York City

## The Rochambeau *Elementary School* White Plains, New York

*H. M. Hatbaway of Starrett and Van Vleck, Architects*

The new Rochambeau School, an elementary building, of 22 classrooms and special rooms, with actual classroom seats for 860 pupils, was recently completed in White Plains, New York. The opening of this school marked one of the steps of the building program sponsored by the board of education of White Plains, to provide for the extremely rapid growing school population now numbering more than 7,000 pupils.

This program has meant an expenditure of approximately \$5,000,000 in construction, including the new White Plains High School, considered by educators as one of the most modern and progressive in the country; also the Eastview Avenue Junior High School, and the Battle Hill Junior High School.

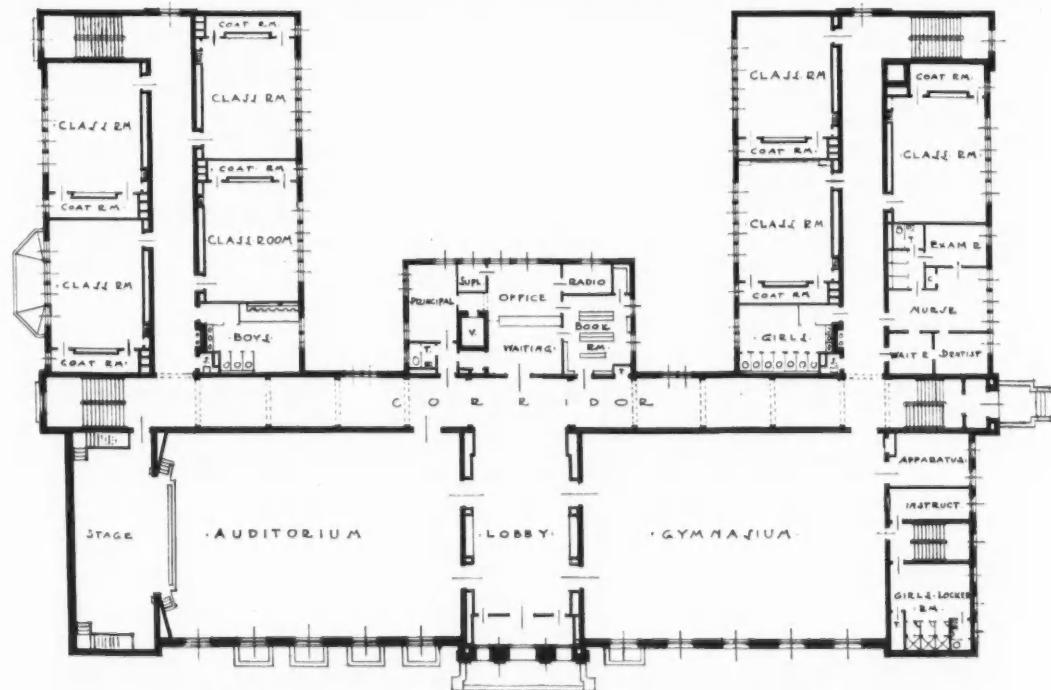
The Rochambeau School constructed at an approximate cost of \$600,000 is Colonial in design, completely fireproof, of brick construction and limestone trimmings. The general scheme is essentially the "U" plan with a main central portion and two wings. Provision has been made in the design and construction for adequate expansion. Many unusual features of planning represent a careful collaboration of Superintendent J. W. Lumbard and Dr. H. Claude Hardy, of the White Plains school board; G. D. Strayer and N. L. Engelhardt, educational advisers; and the architects.

In the preliminary stages the fundamentals of the plan were considerably influenced by two factors. The site for the school, fronting on Fisher Avenue and facing southeast, is located in a fine residential district of the city, with many neighborhood and community uses of the school involved. The topography of the

site presented unusual conditions because of a very decided drop in grade from the front on Fisher Avenue to the rear of the lot—the difference in levels being more than 75 feet from front to rear. The lot dimensions are 303 frontage and 540 feet depth.

The site topography, the completely residential character of the location, and the com-

munity uses of the building, influenced the architects to locate the auditorium and gymnasium in the main central portion of the building, separated by the main entrance and lobby, presenting unusual character to the entire front elevation of the building. This permitted the use of high, arched windows across the entire front of the building each side of the central



FIRST FLOOR PLAN, ROCHAMBEAU ELEMENTARY SCHOOL, WHITE PLAINS, NEW YORK  
Starrett and Van Vleck, Architects, New York City

entrance, eliminating the usual stereotyped appearance of the elementary school, and harmonizing with the residential vicinity. It also allowed immediate access from the main entrance and lobby to the auditorium and gymnasium.

The outstanding feature of the school is undoubtedly the covered play space provided on the roof of the building. This presents a most modern and progressive development. The play space covers the entire roof area of the main central portion of the building and is 63 by 200 ft. in size. The normal main roof of this section was raised on brick piers to give a clearance of 13 ft. 9 in. under the trusses. The open space between the piers provided grille openings 6 ft. 8 in. by 10 ft. 4 in., which are fitted with diamond-mesh wire screens. Three skylights 10 by 35 ft. give perfect lighting conditions for the play area. The floor is of wood properly calked, duplicating a ship deck. Copper gutters covered with a wood-slat grating along each side, provide for ample drainage.

Too much stress cannot be laid on the value of this roof-covered open-air play-area portion of the building. It is available to children at all times of the year, is clean and dry, and of exceptional importance to elementary-grade children, who are not exposed to any dangers of street traffic. It provides for controlled play by teachers, under ideal conditions. Flood lighting is arranged to make the space available at any time for neighborhood groups who may use it for social gatherings.

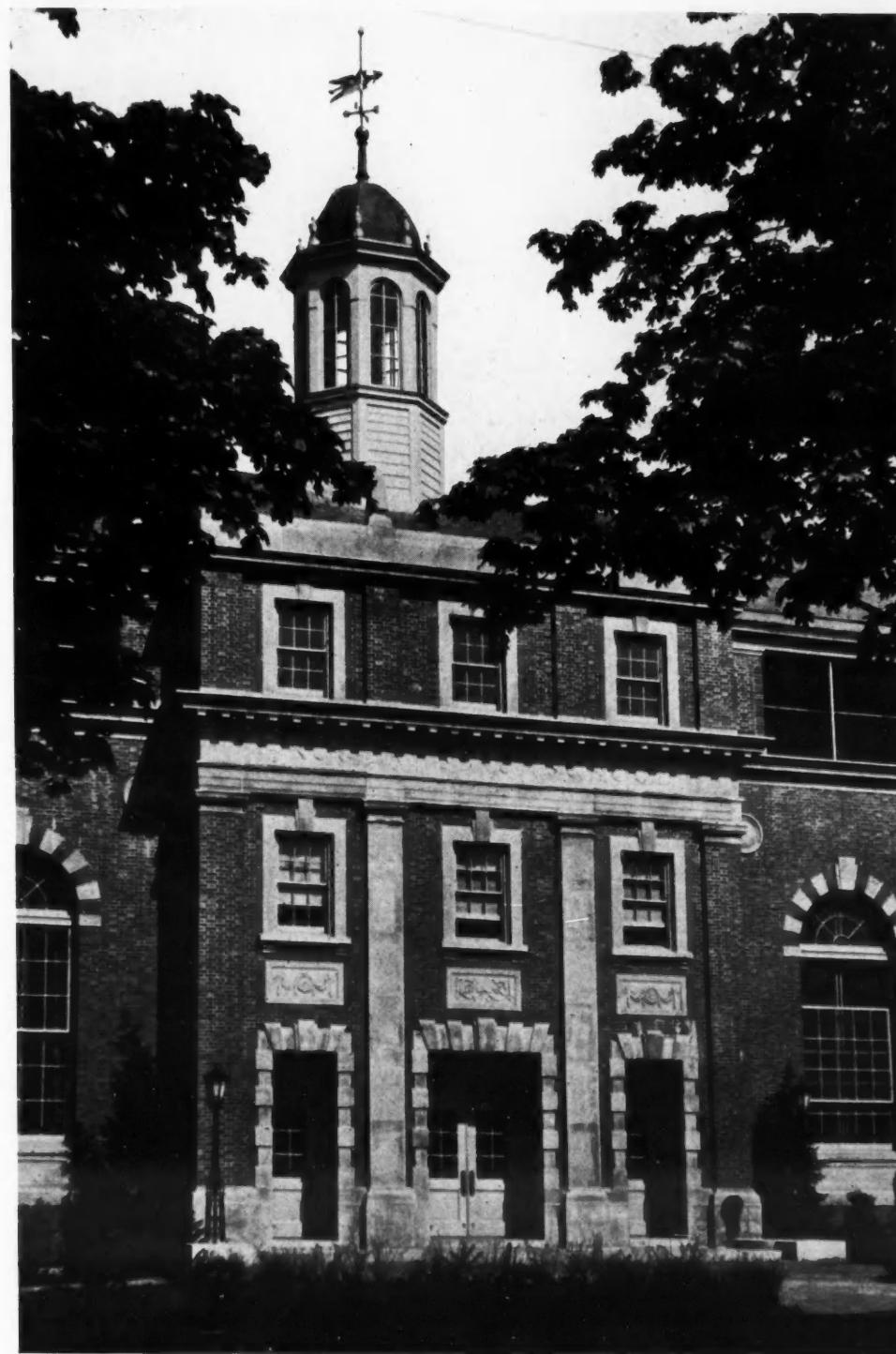
As the normal roof construction of the building is used to cover the play space, the additional expense of raising the main roof provides this ideal play space at a cost which compares very favorably with the local land values for the same area.

Progressive educational authorities for elementary schools have also influenced the architects to include a completely equipped library and conference room, which is located on the central corridor of the second floor at a focal point for all classrooms. Recognizing the library as an integral factor in modern educational tendencies, it has been located in a readily accessible position to all parts of the building. The library is 27 by 41 ft. and amply lighted on three sides.

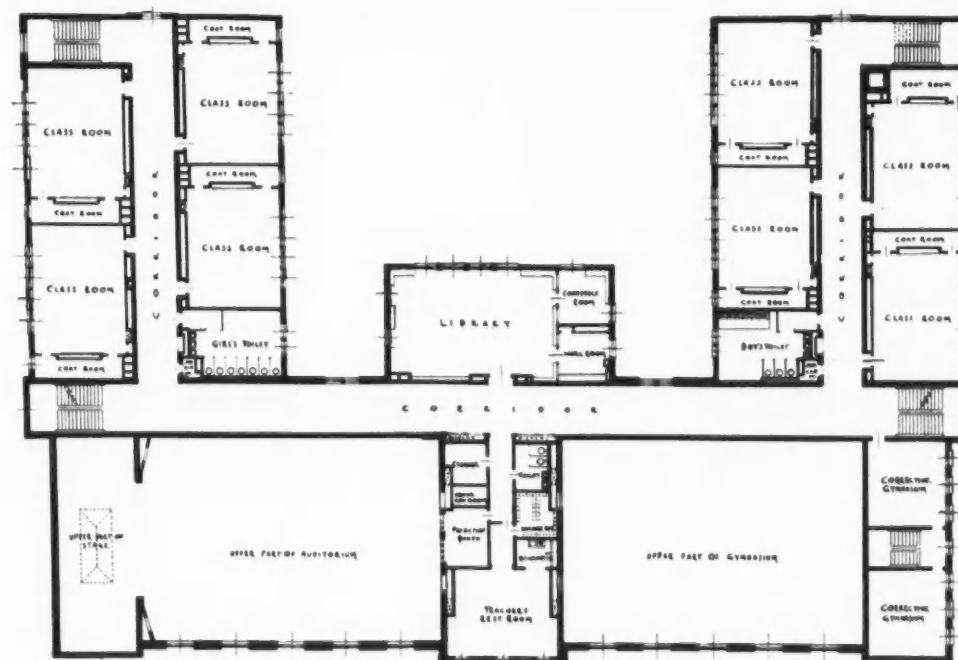
Along with the advanced planning of this school, unusual thought has been applied to the most modernly conceived classroom, not only equipped with latest developments in heating, ventilating, artificial and natural lighting, but also with educational equipment and arrangement for effective instruction and convenience. Built-in equipment provides bookcases, supply cupboards and drawers, chart cabinets, magazine racks, vertical file cabinets, and teachers' closets.

At the rear of each classroom an individual compartment-locker cabinet for each pupil is recessed between two entrances to the coatroom space adjoining. The coatroom has a window at one end and ventilating ducts at the other connected to the main ventilating systems, providing ample ventilation and natural lighting. Metal brackets with a double row of poles with hooks are arranged with a wood-slat top for hanger space. An umbrella rack and overshoe compartment is included in the coatroom.

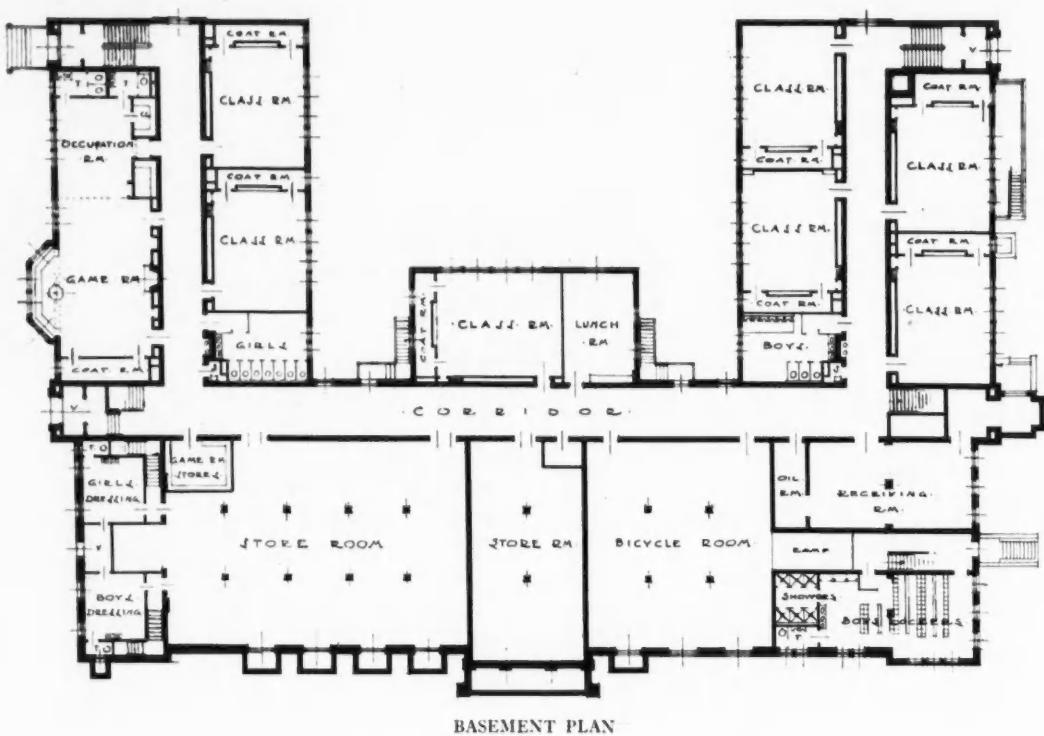
The classrooms are equipped with movable desk-and-seat units, assuring flexibility in seating arrangement and orientation. Additional classroom equipment includes ample blackboard space, display rails, five cork-board bulletin panels, radio loud-speaker, electric clock, individual thermostat control, lighting-switch panel, and recessed lavatory. Special attention has been given to attractive decoration in the classrooms, with suitably tinted walls and harmonizing finish on the woodwork, built-in fixtures, picture moldings, and movable equipment.



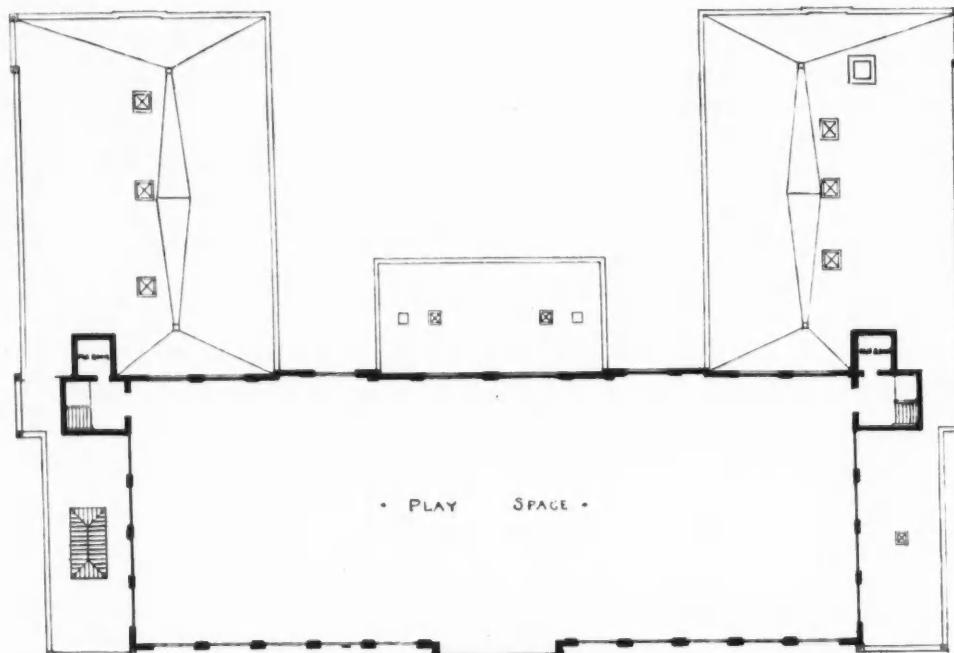
ENTRANCE DETAILS, ROCHAMBEAU ELEMENTARY SCHOOL, WHITE PLAINS, NEW YORK  
Starrett and Van Vleck, Architects, New York City



SECOND FLOOR PLAN, ROCHAMBEAU ELEMENTARY SCHOOL, WHITE PLAINS, NEW YORK  
Starrett and Van Vleck, Architects, New York City



BASEMENT PLAN

PLAN OF PLAY SPACE AND ROOF, ROCHAMBEAU ELEMENTARY SCHOOL, WHITE PLAINS, NEW YORK  
Starrett and Van Vleck, Architects, New York City

The classroom doors, opening outward in a recess formed by the double corridor wall, are equipped with six-light glass in the upper panel and arranged with fixed overhead glass transom for natural corridor lighting.

The corridors throughout have been carefully planned. They are fitted with recessed drinking fountains and grilles covered radiators to eliminate completely any projections beyond the corridor walls, presenting a thoroughly practical and satisfactory appearance, and making available the full width of the corridor at all points. Every corridor has direct access to the outside through stair halls located at the corridor intersections.

The auditorium at the left of the main-entrance lobby is 50 by 75 ft. with a stage 20 ft. deep and 46 ft. 6 in. wide. The auditorium seats 484 on the main floor. The walls and ceiling are acoustically treated and arranged with attractive window and stage hangings. A motion-picture booth, radio loud-speaker, suitable stage lighting, ample dressing rooms, and equipment storage rooms are provided.

At the right of the main-entrance lobby is the gymnasium 50 by 75 ft. in size, and adjoining, an apparatus room and instructor's office. The girls' locker and shower room also adjoin

the gymnasium. Two corrective gymnasiums are located directly over these special rooms. The boys' locker room and shower equipment are placed at a lower level.

A special health suite is provided on the main corridor near the north entrance and readily accessible to the administration offices. A nurse's room, examination room, dental room, and waiting room provide suitable clinic quarters, coördinating with the requirements of the community health program.

The kindergarten has been especially planned to carry out its educational objectives under attractive surroundings, and is also thoroughly modern. The essential plan consists in a large room divided by a folding door, separating the major game room and the occupation room. The game room has a large bay window with built-in window seats surrounding a fountain. On the opposite side is a fireplace flanked by cork-board display panels. Many other cork-board display panels are arranged on the other walls, and built-in cabinets and toy closets provide unusual storage capacity. A special coat and locker room is provided, as well as toilet facilities for boys and girls. Drinking fountains are recessed in the corridor wall. Careful attention has been given to attractive

decorations, window hangings, and finishes of the fixed and movable equipment.

The marked slope of the lot has made it possible to provide, with little excavation, a basement plan above ground, to include far above the normal amount of general storage space, as well as ample bicycle rooms, receiving rooms, employees' rooms, and lunchroom. This basement space also includes the boiler room, coal storage, pump room, janitor's room, and electric transformer and service equipment at practically ground levels.

## SCHOOLS HOLD BOND-BURNING DEMONSTRATION

Irl L. Dulebohn, Superintendent of Schools, Ramsay, Michigan

The Bessemer Township School District at Ramsay, Michigan, carried out a "Bond-Burning" celebration of May 19, to mark the paying off of a bond issue which had financed an extensive building program begun about fifteen years ago.

The Bessemer Township School District is a large township-unit district in Gogebic county, Michigan, embracing four congressional townships and including timber lands, mining districts, and some agriculture. Fifteen years ago there were seven schools, three of which were one-room buildings, one being held in the living-room of a residence. There were 800 pupils under the instruction of 20 teachers. Due to post-war conditions, the mining companies in the township made extensive developments and the number of pupils suddenly increased to 1,500.

In 1919, a modern building was erected and paid for by accumulated surplus and an additional tax. A bond issue of \$300,000 was floated in 1920, which financed the erection of two buildings. In 1924, a third building was erected to house a modern rural agricultural school. The cost of the building was \$80,000, and was spread on the tax roll and paid in one year. In 1926, two large additions to buildings costing \$160,000 were erected, the money for these undertakings being raised by direct taxation. In 1929, a third addition costing \$15,000 was erected and paid for in the same manner.

In 1925, the school district began to close its one-room schools and to provide bus transportation, so that by 1926, the entire school population was housed in four modern buildings. The school district now operates seven large motor busses, as well as a ten-ton tractor and snowplow to keep the roads open in the wintertime. The efficiency of the transportation system even under adverse weather conditions prevailing in these localities, is attested by the attendance record of 97 per cent which is regularly maintained. Under the old system, 87 per cent was the average for attendance.

During the fifteen-year program, the school district has spent for buildings and transportation equipment a total of \$750,000. The bond burning of May 19 followed the payment of the last of the outstanding indebtedness. It is worthy of note that outside corporations pay about 95 per cent of the taxes in the district.

The improvement in organization and instruction has kept pace with the building facilities. Instruction in the schools runs from kindergarten to the ninth grade, inclusive. About 95 per cent of the graduates enter high school. All senior-high-school students are transported to the high school.

The membership of the board of education has been rather stable during that length of time. The board is composed of five members who are elected for three-year terms. During the fifteen years, eighteen different men have served on the board. The members of the present board are Nesto Erickson, C. E. Anderson, E. J. Mahan, Adelarde Parent, and A. J. Fink.



GEORGE WASHINGTON SCHOOL, LANCASTER, PENNSYLVANIA  
Henry Y. Shaub, Architect, Lancaster, Pennsylvania

## The Platoon-Type School Building at Its Best

### The George Washington School, Lancaster, Pa.

#### THE SCHOOL

By Supt. H. E. Gress

The schools of Lancaster are organized on the 6-3-3 plan. The George Washington School was built as one of the elementary units comprising a kindergarten and the first six grades.

The platoon type of organization is used in the three or four upper grades.

This school was completed and ready for occupancy January 31, 1933. The building and the East Junior High School are located on an 18-acre tract of land in the southeastern part of the city. The size of this plot makes available sufficient space for outdoor play activities and athletics. Located between the two buildings is a rather deep ravine covered with trees. This ravine provides a splendid opportunity to study nature. It is planned to plant here all the different trees and shrubs that will grow in this locality.

The maximum capacity of the present buildings is 800. The regular classrooms, including a first-grade classroom with lavatory, kindergarten, general-arts room, music room, nature-study room, library, auditorium, and gymnasium are shown in the accompanying cuts.

The objective in this building is to enrich the material of instruction and increase the activities of the children in the life of the school. The result of this will be a better all-round development of the pupils and training for citizenship.

The general-arts department is an activity center where the child is given freedom of self-expression, be it in drawing, painting, modeling, sewing, or construction, and through these activities is experiencing understanding and learning how the world's work is done.

To successfully carry out these activities or "units" requires close correlation with all other subjects in the elementary curriculum and co-operation on the part of both pupils and teachers. Pupil interest is the foundation for unit development and as the unit grows, interest, enthusiasm, and creative thinking increase. Every child is soon adding his contributions to the unit and, together with others, is gaining a rich,

integrated experience, and is happy and learning without strain. This working together, sharing experiences, joys, responsibilities, and ideas, all tend to make the child conscious of himself as a member of a social group, which alone is a life situation and has real educational value.

A method of organization will not exactly take care of itself. The teacher must be on the lookout and make provisions for the worthwhile thing in life. Approaches are made through life situations and child experiences.

To illustrate: At present, plans for a Holland project are under way. Collections of all relevant

materials are being made. English and history classes are reading and studying about food, shelter, costumes, industries, music, folklore, and arts of the people. Stories are being written and dramatized. The geography and science departments add their contributions to the unit in the study of location, industries, transportation, food and lives of the Dutch and their relations to other countries. The music department contributes the musical arts, lives of composers, etc., while the home-economics department contributes studies in food values, textiles, and costumes.



KINDERGARTEN, GEORGE WASHINGTON SCHOOL, LANCASTER, PENNSYLVANIA  
Henry Y. Shaub, Architect, Lancaster, Pennsylvania



NATURE STUDY ROOM, GEORGE WASHINGTON SCHOOL, LANCASTER, PENNSYLVANIA  
Henry Y. Shaub, Architect, Lancaster, Pennsylvania

The general-art classes thoroughly study the arts and crafts of the Dutch and their contribution to history. Handiwork, including drawings, paintings, architecture, friezes, pottery, bookmaking, puppets, etc., becomes very worth while. Here also actual problems in construction, organization of unit, and assembling take place.

The entire project tends to build up worthwhile attitudes and understanding on the part of the pupil, and little by little unfolds the study of the past, while it leads up to the understanding of the present.

The problem of training in health habits and providing physical activities for the children are taken care of in the gymnasium. The program is so arranged as to provide one period a day for every child in the gymnasium or on the playground. This is always under the direction

or supervision of a regular physical-training and health teacher.

The program in the auditorium provides for the self-expression and socializing activities of the children. Here the pupils through the dramatizing of stories, singing of songs, and conducting club activities have a better opportunity for self-expression than through the conventional type school.

In the nature-study room and on the tract of ground surrounding the building where there is a ravine covered with trees and plants the children are brought in close contact with nature in the various forms. In this manner the nature work will be real and create an interest for the children in this subject.

In short this school was organized and built with the idea of meeting the needs of the children and, by motivating and integrating the ac-

tivities, making it a place where they will have a more or less all-round development.

### THE SCHOOL BUILDING By Henry Y. Shaub, Architect

The George Washington platoon-type grade-school building occupies a practically level site. The building lot of about nine acres faces on two streets, the more important street running north and south.

The building measures 207 feet on the front and is 200 feet deep. It is two stories high, without basement except for a small portion of the rear used for the heating apparatus and mechanical equipment.

The architectural style adopted is modern American and depends entirely for its effect upon the simple mass and composition of the building. The exterior walls are faced with a rough-texture red brick laid up in colored mortar to match, with Indiana-limestone trim around the entrance and copings. The sash are steel, painted aluminum, while the spandrels, mullions, and tower roof are lead-coated copper. In its simplicity of design, and with the use of economic but permanent materials, the appearance is very pleasing and effective.

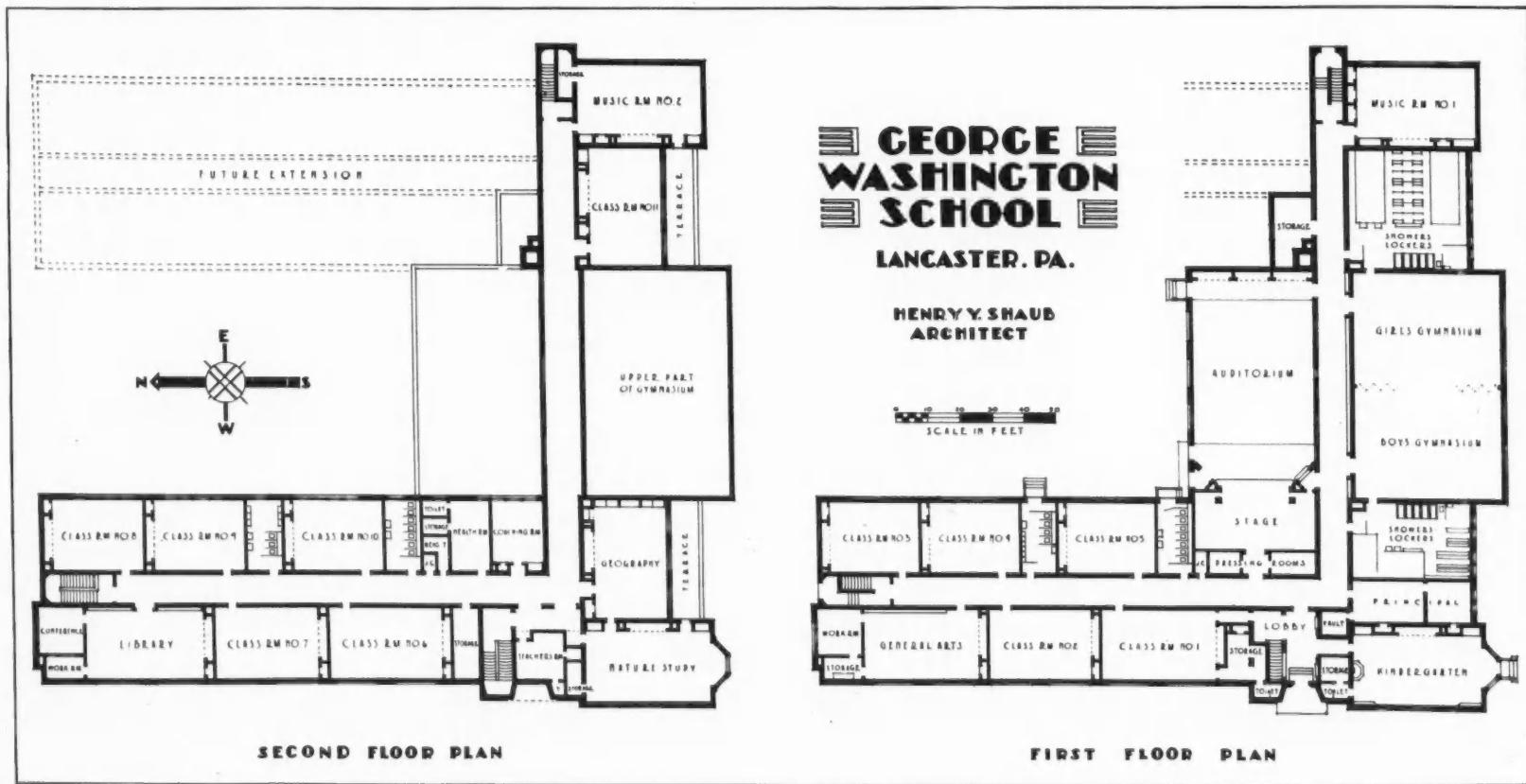
The building is entirely fireproof; the floors and interior framing are reinforced concrete of the pan-system type with nonbearing partitions built of gypsum block.

The building is planned on the shape of an L. When the future extension is added it will be in the shape of a U. At the present time it has a capacity of 800 pupils and when extended, as shown, it will have a maximum capacity of 1,200.

The arrangement of the floors and the relation of departments and rooms may be well understood from the accompanying floor plans. The first floor includes the auditorium, the gymnasium, the dressing and shower rooms, principal's office, various classrooms, the general arts department, music room, the kindergarten, etc. The second floor contains classrooms, library and conference room, nature-study room, music room, geography room, coaching room, health room, teacher's room, etc.

In designing the building the architect had in mind the important problem of reducing circulation between departments and the segregation of rooms in which noise occurs. As

(Concluded on Page 52)



## School Equipment Inventories

**Lloyd L. Ramseyer, Principal, Heyworth Community High School, Heyworth, Illinois**

Good business methods in the schools are not primarily different from methods used in business conducted for profit. Business enterprises have for years taken careful inventories of their stock and equipment. It has seemed necessary to do this in order that the owners might know exactly the extent of their resources. Schools have enormous investments in capital equipment. In a large city this equipment is frequently valued at more than a million dollars. If this property were in cash, it would be watched and guarded with the greatest care. Yet, in the form of equipment it is often sadly neglected.

Can the inventory help to protect this property? Does the inventory have a place in school business as it does in private business? And, if it does, how can it best be taken? What records are necessary? Answers to questions such as these were sought in a study the results of which are described here.

The present article is based on a study of 121 cities, with a population of 50,000 or more. Inventory blanks from 45 cities were received and studied. All but 30 of the cities reported some form of equipment inventory. The results shown below were taken from the reports of 83 cities.

### Articles Included as Equipment

This study included only equipment and not inventories of consumable supplies. In general, supplies are rapidly used while equipment is of a more permanent nature. Schools vary, however, from this general definition. Often it is more convenient to consider an article of small value, of short life, or of a fragile nature, as a supply rather than as equipment.

An attempt was made to get some idea of the dividing line which schools draw between these two types of property. Thus 49 cities reported that all equipment more or less permanent is included in the equipment inventory. Twenty stated that articles of rapid depreciation are omitted, although 10 stated how long they expect this period of usefulness to be in order that the article be included. Six stated that period to be 1 year, 1 said 3 years, 2 of them, 2 years, and 1 said 5 years. Nine cities reported that articles of small cost were omitted, although 6 reported no exact minimum cost in order to be included. One city reported 50 cents to be that minimum, one, \$3, and one, \$5.

The line to be drawn between supplies and equipment seems vague and indistinct. It is very important, however, that all school officials and employees in any city should know exactly where this line is drawn. Some cities print the equipment list on the inventory blanks, thus making clear what is to be included. In St. Louis a catalog is printed in which supplies and equipment are both listed. Supplies have the letter S before the catalog number, while the letter E is found before the catalog number of equipment items. In order to make this classification, some arbitrary distinctions are made. It at least suggests a way in which practice throughout a school system may be made uniform.

### Uses of the Inventory

Five possible uses of the inventory were suggested to the cities which coöperated in the study, and the superintendents and business officials were asked to evaluate each of these uses. In Table I the results are shown. First choices were given a weighting of 5, second, 4, etc. Items merely checked were given the median weighting of 3.

Since an inventory makes necessary the listing of all equipment and its location, a complete inventory will make it impossible for usable school equipment to be stored away where it will be unused and forgotten. The reordering of equipment which is already owned in sufficient amounts is thus prevented. Transfers are also made possible, since unused equipment is located by the inventory and may be removed from one schoolhouse to another as needs arise.

The inventory as a basis for the determination of the amount of fire insurance necessary leads in first choices of school officials, although it falls slightly behind in the weighted score. This is the more remarkable when one considers that a number of large cities do not carry insurance on school

property. The value of an inventory which gives equipment values in determining needed insurance is obvious and needs little comment. It is difficult to understand how any insurance estimate which is little more than a guess could be made without it.

TABLE I. Uses of School Equipment Inventories

Uses	First	Second	Third	Fourth	Fifth	Check	Weighted Value
By giving amount and location of equipment, to prevent the purchase of unnecessary equipment.	15	13	7	3	2	20	216
To serve as a basis for determining the amount of insurance necessary	24	5	6	3	1	15	210
To prevent loss of property through theft or displacement	6	5	10	2	3	15	132
To aid in calculating school costs	7	8	4	1	3	14	126
To aid in discovering and replacing obsolete, worn out, or defective equipment	2	12	5	4	2	14	125
*Basis for insurance adjustment after fire	1	1	0	0	0	3	18
To give cost of replacement of equipment	0	3	0	0	0	0	12
*To suggest possibility of advantageous equipment transfers	0	1	0	1	0	0	6

\*Items suggested by school officials.

By means of the inventory an entire department of instruction, a school building, or a single classroom can be made accountable for equipment. Thus, theft or displacement of property can be checked. Without some record of the equipment in a given department or room, valuable equipment may disappear without any definite possibility of detecting the loss. If the immediate value of a piece of equipment were represented by the corresponding amount of cash, it would be definitely protected. Why should not these same values in the form of equipment be as zealously protected by the teachers and school executives? The inventory can be made to aid in this protection.

If the condition of school equipment is given in the inventory, the statement of fact may serve as a basis for determining what equipment is no longer functioning efficiently. Merely a systematic examination of equipment as is demanded by an actual physical inventory makes the discovery of needed replacements readily possible. Such periodic examination will lead to the consideration of needed repair to prevent an article from becoming entirely useless, thus making the complete replacement unnecessary.

### Types of Inventories

Inventories are of two general types, periodic and perpetual. With the periodic type, the count is taken at fixed intervals, usually annually and sometimes biennially, but no attempt is made to correct the records between these times. With the perpetual type of inventory the records are kept up to date, additions and losses being recorded as they occur.

In this study, from answers to two specific questions, it was found that 48 per cent of the cities record losses as they occur, and 47 per cent report additions throughout the year. However, only 32 per cent of the cities record both losses and additions on a continuous basis. In reality, then, 32 per cent of the inventories are really perpetual, although in most cases, there is also a periodic check-up.

The ideal inventory for any school system is a combination of the perpetual and the periodic types. Undoubtedly, there are immediate advantages in keeping the records constantly up to date. Yet, it is difficult to see how property can be properly protected by the perpetual inventory alone. In the best-regulated schools many losses of equipment will go unreported. These can be detected only by a periodic check-up, which in the experience of the most efficient school executives is an essential part of the inventory procedure.

### Inventory Forms

In any commercial form intended to provide substantially the same information, no greater variety of content and arrangement could be imagined than that found in the forms studied. Inventory forms from 45 cities were received and studied. They vary in every conceivable way—size, color, shape, content, arrangement—in fact, in every possible detail. Some seem very excellent, while others are entirely without thought of purpose or result.

Four general types of inventory blanks are used. Of the 82 cities reporting in this part of the study,

48.3 per cent use loose-leaf forms, 34.1 per cent use bound forms, 12.2 per cent take their inventories on blank paper, and 11 per cent use cards. A few used more than one type, hence the seeming inconsistency. Some cities using loose sheets, have them bound after the record is complete, so that filing is easy and permanent.

Table II is a picture of the great variation in content of the forms. These results were compiled from replies to specific questions asked of the school officials. Seventy-two cities answered the

TABLE II. Items Included on Inventory Forms

Items	Num- ber	Per Cent
Name of person taking inventory	43	55.8
Name of building, room, or department	41	53.2
Present condition of equipment	39	50.7
Number of articles of each kind when last inventory was taken	39	50.7
Additions during year	39	50.7
First cost of the article	35	45.5
Transfers of property	32	41.6
Present value of article	30	39.0
Place for remarks	29	37.7
Date of purchase	25	32.5
Equipment lost or stolen	25	32.5
Breakage or destruction of property	24	31.2
Company from which article was purchased	18	23.4
Payment of fine for breakage	12	15.6
Rate of depreciation	8	10.4
Value at last inventory	7	9.1
Columns for checking the number of articles of one kind for several years		
Number of years not given	6	7.8
Two years	1	1.3
Three years	1	1.3
Eight years	1	1.3
Ten years	7	9.1
Columns for checking the value for several years		
Number not given	2	2.6
Five years	2	2.6
Ten years	2	2.6
Each article is marked with an identification mark which appears on the inventory	4	5.2

questions and per cents are worked out on that basis. The very fact that no single item was included on more than 55.8 per cent of the forms, shows the lack of understanding of aims. Only five items are included in more than half the forms, and two of these are matters of routine rather than a part of the inventory itself.

Let us see what bearing these items have on the realization of our inventory aims. In that way we shall be better able to select those items which are essential and eliminate those which we do not want.

In order to prevent the purchase of unnecessary equipment, it is necessary to know the building, room, or department in which the equipment is located. The number of articles of each kind and something about their condition must be known. A brief description of the equipment, is essential in order that duplication may not be made unknowingly. Some information concerning the number of pupils using the equipment and the size of the largest class would aid in estimating class needs thus preventing purchase of unnecessary equipment.

To serve as a basis for determining the amount of insurance necessary, a tabulation of the value of equipment is needed.

### Details of Forms

In order to keep a close check on equipment it would be well to know the name of the person taking the inventory, the number of articles of each kind, both at the present and the last inventory, additions during the year, a record of transfers, breakage, losses, and payment of fines.

The majority of inventory forms are weak in that they are arranged for use during only one year. There is no way of checking the present number of articles against the losses and additions, and the number on hand the previous year, without referring to the inventory blanks for the last year.

Values and the change in values from year to year are the chief things necessary in order to make the inventory helpful in calculating school costs. If interest charges or depreciation are to be included in costs, the original cost and the present value of the equipment must be known. One is safe in assuming that many school systems do not know, with any degree of accuracy, the value of their equipment.

To aid in discovering and replacing obsolete, worn-out, or defective equipment, information con-

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# THE AMERICAN School Board Journal

EDITORS:



WM. GEO. BRUCE

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## *Putting School-Board Candidates on the Spot*

**I**N ORDER to make intelligent choice for school-board honors the candidate must be known to the constituency in point of citizenship, character, and ability. Where the elective system prevails in the larger communities it has been found expedient to place the preliminaries into the hands of a committee. This committee, or steering body, practically nominates the candidates and informs the public regarding them. It ignores political party organizations and thereby wins public confidence.

In the smaller communities, where everybody knows everybody else, these preliminaries are not necessary. The candidate for a membership to the board of education is usually known as to his occupation and his qualifications. The constituency can here readily express its choice between the several candidates.

But communities differ. There are those in which the best citizenship shirks public office, and where the mediocre stands ready to strive for election honors. Again, there are communities where public sentiment is so crystalized that the worthy citizens express willingness to serve and are readily recognized by popular approval.

While it must be assumed that a high type of citizenship is found in every community, it does not always follow that this type is reflected in the board-of-education personnel. Much depends upon the initiating influences and forces that are at play and that serve in creating a popular sentiment in recognizing prestige, character, and efficiency.

If cities like Pittsburgh, Cincinnati, and St. Louis can boast of high-class boards of education, it is because public sentiment will recognize none other. For several years Indianapolis was afflicted with a troublesome and inefficient school board. Then a progressive citizenship awoke to the situation, and proceeded to campaign for an administrative body that measures up to the most acceptable standards. Its efforts were highly successful.

In Chicago for several years the prospective candidates for school-board honors were cross-examined by the aldermen who in turn conveyed their approval or disapproval for appointment to the mayor. The results were not conducive to the creation of an acceptable board of education. Political expediency rather than real merit became the controlling factor.

In recent years a new approach to the manner of selecting school-board members has come to the surface; namely, an approach whereby the candidates are subjected to a series of questions. The questions are designed to establish the attitude of the candidate on policies with which he must deal if elected to office.

Thus the inexperienced and untried is called upon to state exactly what he would do if this, that, or the other problem came under his jurisdiction. In order to observe the courtesies of the situation he will answer all questions to the best of his ability. At the same time, since he is a candidate who does not want to encounter defeat he may therefore unconsciously shape his answers so as to please the questioners. A premature commitment is bound to lead to embarrassments.

In a California city an educational body presented the school-board candidates with a series of questions which relate almost entirely to the probable attitude of the administrative body to the professional workers. Here are three typical questions:

Can important economies be made without adversely affecting teachers' salaries?

Can the spread of employment be made to advantage of the probationary teachers without reacting severely against those regularly employed?

Are you in favor of one principal's report of a teacher on incompetency or should the teacher be transferred to have the benefit of another principal's judgment?

Unless the candidate is known to be hostile to the teaching fraternity, it would seem quite improper to forestall or bind action on questions which lie wholly within the province of the board of education. Does it not follow here that if the answers are not to the liking of the teachers, the candidate is to be punished by an adverse vote? Is it not a fact that the mental, moral, and physical welfare of the school child is, after all, a primary consideration? Finally, does it not follow that the record of the candidate, as citizen, business, or professional man, affords a sufficient guide in making the choice?

The assumption must be that if the candidate for school-board membership enjoys the confidence of the community as to character and efficiency that such confidence is the best answer to questions. An inquisitorial attitude on the part of certain groups can only be construed as arising out of selfish motives and interests. Surely, the attitude of the board of education toward the professional workers should be fair and equitable, and the assumption must be that an honorable citizen who consents to assume school administrative duties and responsibilities must also be credited with exerting honorable methods and policies.

Pre-election inquiry can at best extend only to the question of character and efficiency and cannot with any degree of consistency attempt to forestall policies and practices on the part of the candidate-elect. That bridge must be crossed when it is reached.

## *Some Observations on the School-Supply Industry*

**T**HE present decade is unquestionably bringing into play new approaches and conceptions in the relations between the government of the United States and business.

For many years the cry was that mergers and combinations were designed to create monopoly and that government must oppose all movements and departures in restraint of trade. Thus, if any group of manufacturers in allied industries proceeded to reach an understanding as to production and distribution, prices and sales conditions, the government clapped down upon them and declared the negotiations a step in the direction of restraint of trade, and hence unlawful.

We recall a period in the school-furniture and school-supply industry when things were at a low ebb, when the losses were greater than the profits and bankruptcies were the order of the day, and when a factory fire, properly covered by insurance, was not deemed an absolute calamity. The only salvation for the industry was suggested in a combination which would regulate output and prices, and obviated ruinous competition and rivalry. When this had been accomplished by bringing several furniture manufacturers under the direction of a united organization, trouble followed. The government placed the leaders under arrest and punished them by heavy fines and some prison sentences.

We have for years heard cries about textbook trusts and school-furniture trusts, and whenever and wherever heard they have aroused public opinion and have put school officials on their guard. But, what followed? In every instance it developed that there were no trusts and that the smaller houses were continuing to live and do business in the same old way.

The experience of time here has taught that in the nature of things there can be no monopoly in either the textbook business or the school-supply trade.

Moreover, experience has taught that rivalry in business whereby the consumer profits at the expense of the producer has the tendency to break down rather than strengthen the economic structure. The realization that when somebody in a business transaction is the gainer and the other the loser that society as a whole has also been the loser. When the producer pays a proper price for his raw materials, compensates his labor with a living wage, exacts a reasonable earning upon his investment, and sells his product at a price that contemplates the foregoing factors, he is only obtaining that to which he is justly entitled. On the other hand, society gets what it pays for and no more.

The day is at hand when a more intelligent and equitable approach

will govern the question of trade relations. An enlightened governmental policy will have an eye upon the producer who undersells the market as well as upon him who strives to monopolize things. The man who engages in deception, so far as the quality of his product is concerned, who pays a starvation wage to his workmen, and is thus enabled to undersell his competitor, benefits no one, but disrupts an entire industry.

The solution to the problem must be found in the regulation of an industry whereby government will aid rather than prevent a form of coöperation which contemplates all the equities involved in production and distribution, and determines upon sales prices that are equitable and just to the consumer. The purchaser of school supplies and furniture stands ready to pay the price that is right in the light of quality and the cost of production. If the purchaser is entitled to protection against an unfair sales cost, the producer likewise is entitled to protection against ruinous rivalry and cut-throat methods.

The so-called cartel system whereby those engaged in an allied industry are permitted under government supervision to come to a common understanding as to quality and prices is well worth the thought and study of modern statesmanship. It suggests a solution of the problems of the textbook and school-supply industries. It will insure fair prices and better service to the schools.

### **School Support and the American Dollar**

MUCH is said in these days regarding the subject of school support. The educator, who is true to his calling, is not inclined to sit by and note with complacency the cuts and slashes to which the average school budget is being subjected. Here and there he rises in protest and gives voice to his feelings in the matter. He brings to the fore, in eloquent and convincing language, the place which popular education takes in the all-important task of continuing a democratic citizenship. In this direction, he performs a timely and valuable service.

The hysterical and unwise pleader is also heard. He stands in a threatening attitude, and sounds the gong of alarm, and forebodes calamity and destruction. There is the schoolmaster who rises to tell the authorities that they may cut and slash the budget from top to bottom, but must not touch the salary schedule. Another berates the bankers and financiers, and tries to find someone who can be accused of all the troubles that now afflict the world. A third contends that the school interests had always been treated in a beggarly way, and that it was high time that a new approach to the subject of school finance be reached.

The seasoned and balanced educator views the situation with calm and circumspection. He sees the problem in its entirety, weighs and measures the several factors in their relation to one another, and seeks to read out of a complicated situation a clear and logical course of action. He knows that nothing is gained through the alarm bell or through dire forebodings. He brings to his service the cold, hard facts, and solves the puzzle in a matter-of-fact way.

Two considerations enter into the reckoning. The one deals with the tax ability of the school unit, and the other with the preservation of standards of efficiency. To adjust these two in a manner that will keep the school upon an acceptable level is the task that not only falls upon the school administrator as such, but upon him who combines in itself the educator-statesman.

The American dollar is the immediate factor to be dealt with. The number of dollars, which legally come within the control of the school administrator, must guide the solution of the problem which is general rather than exceptional. The dollar that does not exist cannot be expended. The inevitable must be met and is being met with all the genius and ability which has characterized the American people since the establishment of the Great Republic. They are capable of solving their own problems with consistency and wisdom.

### **School Boards and Public Safety**

THE question of disciplinary authority, as exerted by the school authorities over pupils while in transit between school and home, has been thrashed out in the courts of law time and again. Here it has usually developed that where the conduct of pupils is

likely to affect the morale of the school as a whole the disciplinary authority of the administrative body extends beyond the school premises.

In these days of congested and dangerous street traffic, the problem of physical safety rather than decorum and behavior on the part of pupils is becoming the concern of school authorities. The precautionary measures taken have found expression in special police service supplied at the street intersections adjoining schoolhouses and the operation of student patrols.

In Boston, Massachusetts, the school board has gone a step farther in that the dismissal of pupils at the end of the school day is brought under definite control. The regulation adopted embodies the following:

"1. Entrance doors of all buildings, except portables, must be locked from the outside, so that no one may enter unannounced. Visitors must be directed to report to the principal or to the teacher in charge. Only a member of the family may interview a pupil in the school building. Masters will please assure themselves that the person who desires to interview a pupil — representing himself as a member of the family — is just what he claims to be.

"2. A pupil who wishes to be dismissed before the close of the session must present a satisfactory note from the parent or guardian. (Masters have on file an authentic example of the parent's signature.)

"3. A pupil may be dismissed on the request of a parent over the telephone only under most extraordinary circumstances, and then only after the principal, by calling the home, has assured himself that the call was genuine.

"4. Pupils must not be dismissed in the care of a chauffeur, taxi driver, or nurse, unless this person presents a bona fide note from the parents."

The precaution here exercised seeks to obviate the dangers of kidnapping and similar dangers which have manifested themselves in recent years. With the increasing dangers of modern street traffic pupils must also be instructed as to the movements on the way from the home to the school, and their return.

In the smaller communities these dangers are less acute, except where a schoolhouse happens to be located on a much traveled highway. The need for precaution against traffic dangers is by no means confined to the larger centers of population.

### **Ban on Multiple School Jobs**

THE movement to exclude the married woman teacher from the schools has, with some exceptions, found general acceptance with the boards of education throughout the United States. The policy to extend employment to those most deserving, from an economic point of view, has also concerned itself with the multiple-job problem. In the school field, for instance, it is found that there are those who hold more than one salaried position. Thus, teachers who teach during the day also conduct night classes, or fill positions during the vacation season.

In New York City, the board of education has made a study of the subject with a view of spreading employment among as many as this can consistently and wisely be done. A statement made by the school department says that: "According to present plans the multiple-job ban will not be applied to principals and other supervisors in the vacation centers because of the school officials' belief that it would be unsafe to place inexperienced persons in charge of the administration of the play centers. Play instructors, pianists, and kindergartners, however, will be affected."

The thrifty schoolmaster aims to employ his time in some profitable manner. This is, in a general way, most commendable. Besides, he is within his rights as an American citizen to improve his economic welfare whenever the opportunity affords. There is a business side to every profession. In the educational field the compensation is derived through a salary schedule. Promotions, involving a wider field of service and better compensation, are some of the considerations involved in a professional career. They stimulate progress.

In a day when the struggle for existence affects the many rather than the few, there must be a recourse to adjustments which are based upon the golden rule rather than upon a strict adherence to written law.

The policy inaugurated by the New York City board of education has received attention elsewhere. Adjustments are here and there quietly at work. They are made without controversy or needless publicity.

## The Teacher's Salary and Service

The effect of the depression on the qualifications of teachers was recently discussed in a radio address by Mrs. Henry Grattan Doyle, vice-president of the board of education of Washington, D. C. Mrs. Doyle introduced her subject by asking the following questions: "What does the consumer get out of public-school education? Does he get his money's worth? And, while we are about it, who is the consumer?"

Her answer is that "we, the public, are the consumers — we parents, who intrust our children to the schools; we taxpayers, whose hard-earned dollars go so largely to support them; we people who, in various capacities, have to test and use and judge the product of the schools.

"We have the right to insist that our schools shall be housed in clean and safe school buildings; that they shall be properly heated in cold weather, and shall have as much sunshine as possible, and good air at all times; that they shall have suitable playgrounds. We have the right to insist that the school systems be administered wisely and with proper regard for constructive and not penny-wise economy; that it shall have capable administrators and able supervisors, who will not only expend school funds wisely, but will maintain high standards of teaching and develop the finest professional attitude among the teachers who serve under them — in short, that the system shall operate to insure for our children the kind of training they are entitled to have.

"All these things are important and essential. But there is another factor that I have not yet mentioned — an element in any successful plan of public-school education that is far more important than any of these, and, of course, they are all important. I mean the classroom teacher. For five hours a day she has under her control, to mold or mar, the most precious material of any worker, high or low, in the life of our nation. Her influence is on a par with that of the home in the young lives intrusted to her. And when we realize this fact, for a single classroom group, we have only made the beginning; for we must multiply by thousands the effect of this influence to realize its importance throughout the nation.

### What About Teacher Training?

"As the consumer, the public has the right to ask: How are our classroom teachers trained? What is their educational background? We have traveled a long way in teacher training since 1866, when the requirement was merely a course of five, six, or ten weeks on the common subjects — arithmetic, geography, history, and grammar. These courses were conducted by a single person, called the institute conductor, who organized reviews of these subjects and presented the principles of teaching them.

"Since the early part of the present century, the commonly accepted standard for elementary teachers has been 2 years' training beyond the high school. According to figures compiled by Dr. Guy C. Gamble, of the United States Office of Education, in 1930-31, 46.2 per cent of 248,648 elementary-school teachers attained this standard, 27.6 per

cent surpassed it, and only about 1 in 4 — 26 per cent — were below it. However, in the rural areas, over 60 per cent of the teachers in schools having only 1 or 2 teachers, have less than 2 years of training. At the other extreme, in cities of over 100,000 population, only 9.2 per cent have less than 2 years of training. In 25 states this amount of preparation constitutes the maximum state certificate requirement, in years of training, for an elementary-school certificate. In 9 states, the maximum requirement is 3 years, and in 14 states, 4 years. In the majority of the above states, however, there are lower permissible levels for entrance to teaching in elementary schools. These teachers, we may add, have received their training in both publicly and privately supported institutions."

### Raising Teaching Standards

Mrs. Doyle then contends that: "With the surplus of teachers available, it should be possible to secure for new appointments teachers of superior qualifications, even though the scale of salaries available, for reasons which we all deplore, may lie in a range formerly offered only to those of inferior training.

"Thus, one result of the depression may be the raising of the general standards required for appointment of elementary-school teachers. While it is not necessarily true that the mere possession of diplomas or degrees makes better teachers, nevertheless those with advanced training are, on the whole, more likely to render a high type of service.

"If standards are not maintained, the task of administrators in attempting to make selections among many candidates, few or none of whom may have approved preparation, will be burdensome and discouraging. If, on the other hand, the present situation is utilized to raise standards rather than to lower them, the consumer may in the long run agree that the depression has resulted in an improvement in the preparation of our teachers rather than in a loss in efficiency.

"From the consumer's point of view, what are the necessary elements in the training of teachers? It is not enough that the teacher should receive instruction in the technique of teaching, though this is fundamental. As the consumers, we parents and citizens want her to have much more than that. She must have the background of a liberal education. She must be able to teach our children to take a responsible part in life, not merely to master algebra or Latin. We wish for our teachers the kind of education that will make them broad-minded students of human beings and human affairs. We want a teacher who can assume the leadership of the thought of her class, not merely a person who doles out canned knowledge, even if she does it in the most approved manner! This may seem a large order, but teaching is a profession not to be lightly undertaken. Society expects much from teachers, and those who are unwilling to try to meet these expectations should choose some other occupation. One of the good features of the longer course of teacher training now coming to be generally accepted as the standard, is that it gives opportunity for this broader type of cultural training."

there are no loose or protruding bolts, nails, or pins. Standard playground equipment is generally so designed and constructed as to offer no hazard in its normal use when in proper repair. Legal liability for accidents does not exist on the part of school authorities, when equipment is constantly inspected and kept in good repair. If it can be shown, however, that there has been known neglect in safety conditions, legal liability does exist.

Aside from the matter of safety, appearance, and legal liability, proper maintenance is a good investment realized in longer life. The average person does not build a house and never paint it, but playground equipment often receives just this sort of treatment. By actual observation it has been proved that proper care and treatment of slides, as an example, have trebled the life of them.

### Maintenance of Equipment

Specifically, proper maintenance of equipment, therefore, calls for constant attention so that there may be no unsafe conditions. It should also include painting whenever needed, and the regular oiling of all moving parts. Exposed wood surfaces of slides should be treated often with a good preservative, such as linseed oil, not only to prolong life, but to add to its usability and appearance.

The legitimate manufacturer does not take the attitude that improper care will make the equipment short-lived and hence cause earlier purchase of replacements. This offers two dangers; first, that the use of short-lived equipment will discourage its use; and second, that the manufacturer is often blamed for unsatisfactory service, while the cause is lack of proper care. Intelligent self-interest, therefore, causes the manufacturer to welcome the best care of equipment, so that its life may be longer and its use more satisfactory.

The present is the best time to see that all equipment and grounds are in perfect order. It is the time to make repairs and replacements, for a "stitch in time saves nine."

## A VITALIZED COMMENCEMENT

E. T. Tebow, Superintendent of Schools,  
Glasco, Kansas

The schools of the entire nation annually engage in a most significant program. The commencement season represents the climax of the year's activities. School consciousness is at its peak and the natural interest of parents and friends center around the graduates and the work the schools have done for them.

In a program prepared and presented by the students themselves there is a parental and community interest that can never be aroused through the medium of a formal address by an invited speaker. It is a time to drive home the value of schools. The commencement program affords an excellent opportunity to present a sustained study of vital educational needs.

In the Glasco, Kansas, schools this year, the vitalized commencement sought to stimulate the greatest interest in the history of the school. Every seat in the auditorium was filled, many were standing, and it was agreed that the gathering was the largest ever to attend a commencement, and the largest in the building since its dedication.

The central theme "The School, a Laboratory for Developing Citizenship" was stressed. The program attempted to interpret and present some phase of the work of seven departments of the school. Much of the presentation was drawn from actual classroom work, and in the case of the typing speed test, was a real classroom presentation. "The Farmer of Tomorrow" was the subject of a presentation of the agricultural department; "English on Trial" was a one-act play put on by the English department; "Such is Life" was another play on the use of algebra in everyday life; "By Her Clothes You Will Know Her" was a fashion show of clothing suitable for high-school girls, presented by the pupils of the home-economics department.

At the close of the program, the seniors marched to the stage and were presented their diplomas. The entire program consumed only two hours.

• Mr. D. R. SMITH has been elected superintendent of schools at Delaware, Ohio, to succeed R. D. Conrad, who has resigned.

• Mr. H. S. CARROLL, of Granville, Ohio, has been elected superintendent of schools at New Philadelphia, to succeed F. P. Geiger, who has resigned.

• Mr. H. C. WALTERS, of Eau Claire, Mich., has been elected superintendent of schools at Baroda, to succeed Leonard Bestrom.

• Mr. WILLIAM A. WELCH has been elected superintendent of schools at Peabody, Mass., to succeed T. W. Sheehan.

## Repair and Maintenance of Play Equipment

O. W. Douglas, Anderson, Indiana

The old joke about the Arkansas farmer may often be applied to the upkeep of school playgrounds. When asked why he did not patch his leaking roof he replied "that it was raining and he couldn't." Then, when reminded, on a bright, warm day, that he should patch that leaking roof, he countered that there was no need at that time for a good roof — the old one was good enough because it wasn't raining.

Sometimes one is tempted to think that the playground is treated as a stepchild of the school instead of a most important factor in the child's education. Certainly much of the business of life, at least of the small child, is play.

Many times the school playgrounds are allowed to assume a general run-down, unkempt appearance,

not in keeping with the buildings and other surroundings. This condition is not only not conducive to proper pride and care on the part of the children, but it does not always offer safe conditions.

Careful and daily inspection of all playgrounds should be as much a duty and routine on the part of the custodian as firing the furnace, or sweeping the floors. This inspection should not only apply to the equipment, but should also apply to the grounds in general, in order that there may be no unsightly rubbish, broken glass, or other objects likely to cause accidents.

### Inspection of Equipment

The inspection of the equipment proper should include care that all fittings are tight and safe, that



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*Wall-Covering*

A remarkable new wall-covering with a unique combination of good qualities. It need never look soiled—because it is stain-proof and washable. Cannot fade or crack—therefore never needs to be "done over." Lasts the life of the building in which it is installed. Offered in many luxurious patterns that rival the most costly walls in beauty.



Sealex floors  
throughout the

# George F. Baker High School

**G**UILBERT & BETELLE, noted school architects, of Newark, N. J. designed this fine high school for Tuxedo, N. Y.—one of the wealthiest communities in the world. In this case, therefore, the well-known economy of Sealex Linoleum did not carry as much weight as it normally does. Sealex was specified because in every respect it stands out as the ideal school floor.

**Quiet:** Sealex materials are really resilient. They muffle the noise of footsteps in corridors and classrooms. Pupils can concentrate better on their work.

**Easy maintenance:** These floors are made stain-proof by our exclusive Sealex Process. Continual scrubbing is not necessary. Many buildings report that Sealex cuts cleaning costs by as much as 30 or 40 per cent.

**Permanence:** Colors of Sealex Linoleum cannot wear off because they extend through the material. These

floors never need to be scraped, painted or varnished.

**Adaptability:** Various types of Sealex materials were used in the George F. Baker High School. The illustration above shows Sealex Treadlite Tile in the main corridor. For classrooms, heavy-duty Sealex Battleship Linoleum was specified. In the household arts department, an attractive jaspé was used.

**Expert Installation:** When Sealex materials are installed by an authorized contractor of Bonded Floors, both workmanship and materials are backed by a Guaranty Bond. For further information, write our Contract Department.

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# This Wax Isn't Afraid of the Mop



SMART indeed is the school buyer who uses a self-buffing wax to cut floor maintenance costs. But the smartest buyer chooses Neo-Shine, to protect the savings from the wet mop.

Neo-Shine, because it is richer in wax particles, first penetrates the pores of the floor and then spreads a heavier and more evenly-distributed protective armor that withstands the powerful sweep of the wet, cleaning mop.

Cold water—moderately used—to which the thin film of the ordinary wax readily surrenders, cannot penetrate Neo-Shine's gloss. Hence expensive rewaxing is prevented.

Neo-Shine on your school floors will give you all the labor saving features of the self-buffing wax plus the protective waterproof film that makes these savings—permanent.

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We manufacture a complete line of Floor Soaps, Dressings, Deodorizing Blocs, Crystals and Blockettes, Insecticides, Liquid Waxes, Deodorants, Disinfectants, Plumbing Cleaners, and Seal-O-San the famous gymnasium floor finish.

**SCHOOL LAW**  
School-District Government

A decision of the State Board of Education on an appeal from a decision of the superintendent of education on fact questions is final, and will not be interfered with by the courts unless the board acts arbitrarily, or is actuated by fraud or abuses its discretion (Tex. revised statutes of 1925, art. 2656).—*Gragg v. Hill*, 58 Southwestern reporter (2d) 150, Tex. Civ. App.

Proceedings before boards, such as a state board of education, are informal and it is not necessary that the minutes of their proceedings contain the essential elements of judgment, but only that the minutes be sufficiently clear to disclose the board's intention.—*Gragg v. Hill*, 58 Southwestern reporter (2d) 150, Tex. Civ. App.

Though abuse of discretion is absent, a county school board's act is not reviewable by the courts, if the findings are based upon competent and relevant evidence (Ky. statutes, § 4399a-7).—*Howard v. Bell County Board of Education*, 57 Southwestern reporter (2d) 466, 247 Ky. 586.

Where a county school board removed the county school superintendent, the courts will not retry the case, but will examine the record to ascertain whether there was an abuse of discretion (Ky. statutes, § 4399a-7).—*Howard v. Bell County Board of Education*, 57 Southwestern reporter (2d) 466, 247 Ky. 586.

That the removed county school superintendent, who allegedly failed to make official visits to subdistrict schools, and omitted other statutory duties, was so busy with other activities in the advancement of public-school interests that he had no time to comply with the statutes, was held no excuse (Ky. statutes §§ 4399a-7, 4404a).—*Howard v. Bell County Board of Education*, 57 Southwestern reporter (2d) 466, 247 Ky. 586.

### School-District Property

In the absence of an offer to prove fraud, collusion, or caprice, an architect's certificate that final payment in the amount specified was due the school-construction contractor, was held conclusive.—*George H. Evans, Inc., v. School Dist. of Darby Twp.*, 164 Atlantic reporter 826, Pa. Super.

A school district's failure to require satisfactory evidence of the payment of all claims for labor and material before paying the building contractor does not render it liable to the laborer or materialman using no diligence to collect the claim (Vernon's annotated civil statutes, arts. 5160, 5427a, 5427b, 5427b-1).—

*C. A. Dunham Co. v. McKee*, 57 Southwestern reporter (2d) 1132, Tex. Civ. App.

A school district was held not liable for the price of material furnished a school-building subcontractor by the corporation not recording a claim with the county clerk within the time required (Vernon's annotated civil statutes, art. 5160).—*C. A. Dunham Co. v. McKee*, 57 Southwestern reporter (2d) 1132, Tex. Civ. App.

### Teachers

A public-school teacher employed under a general contract, and entitled to indefinite tenure based on service for three years or more, cannot be dismissed for reasons of economy, while other teachers not entitled to indefinite tenure, whose assignments the former is competent to fill, are retained under employment (4 N. J. Complete statutes of 1910, pp. 4763, 4764, §§ 106a, 106c).—*Seidel v. Board of Education of Ventnor City*, 164 Atlantic reporter 901, 110 N. J. 31.

A public-school teacher employed under a general contract, and entitled to indefinite tenure, who was detailed to teach a special class, later merged with general pupils, was held not to warrant the dismissal of such teacher for reasons of economy, while other teachers not entitled to indefinite tenure were retained under employment (4 complete N. J. statutes of 1910, pp. 4762, 4763, 106, 106a).—*Seidel v. Board of Education of Ventnor City*, 164 Atlantic reporter 901, 110 N. J. 31.

### Pupils and Discipline of Schools

A parent who furnished transportation for high-school children must have applied unsuccessfully to both local and county boards of education, to recover against the local board on a quasi contract (Ohio general code, §§ 7610-1, 7731-4, 7749-1, 7749-2, 111 Ohio laws, p. 124).—*Halliday v. Marchington*, 184 Northeastern reporter 698, 44 Ohio App. 132.

A parent, to recover for transporting school children, must show that attention of the board of education, not merely of individual members, was called to the children's needs (Ohio general code, 7749-1, 111 Ohio laws, p. 124).—*Halliday v. Marchington*, 184 Northeastern reporter 698, 44 Ohio App. 132.

### AMONG BOARDS OF EDUCATION

The Milwaukee school board will be required to elect all of its officers by a roll call, and to make it public, under a bill recently signed by the governor of Wisconsin. Under the new law all elections or appointments of members and officers must be made by roll call, must be entered in the records by the secretary, and then published.

♦ Ludlow, Mass. The school board has adopted a resolution presented by the Connecticut Valley Principals' Round Table, providing that any high-school pupil who has failed in two or more subjects for two successive marking periods shall be suspended for the balance of the school year or semester. The action was taken in order to eliminate from the school, pupils who are unwilling or unable to do satisfactory work in the high school.

♦ Fall River, Mass. The school board recently took action to revoke the authority of the superintendent of schools to make temporary appointments of teachers, and to retain such power in the school board alone. The board failed to follow the action of the past two years—suspending automatic increases—and voted adjustments to teachers and clerical employees, involving a total of \$4,656. The increases will not become effective until approved by the board of finance.

♦ Naugatuck, Conn. The school board has approved a plan, providing for a revision of the amount of insurance on school property. The new plan is expected to effect a 20-per-cent reduction in insurance carried. The reduction is based on the fact that there has been a decrease in the value of the property from estimates of the past few years.

♦ Atlanta, Ga. The school board of Fulton county has adopted a textbook-rental system for the grade schools of the county. The plan is a substitute for the former system of direct purchase of books and is expected to effect a saving of \$45,000. Under the rental system, fees ranging from \$2.50 for the first grade, to \$4 for the sixth and seventh grades, will be charged for books, materials, and other supplies furnished. The superintendent has been ordered to compile a list of books, supplies, and materials to be furnished on the rental basis.

♦ The Craft seven-member school-board bill of Mobile, Ala., has been held valid by a court ruling of three Mobile judges. The ruling was given in answer to three ouster suits brought against Clarence V. Evans, J. F. Glennon, and Albert B. Freeland, new members of the board, by nine representatives of local civics clubs. The law increased the membership on the Mobile county school board from five to seven. It was passed at the last legislative session and was opposed by practically every civic organization.

♦ Chicago, Ill. The school board has voted to increase the tuition rates for summer schools. The tuition rates call for a fee of \$30 for the Chicago Normal College, \$4.50 per credit hour for Crane College, \$12 for the first major subject, \$8 for the second, and \$4

(Concluded on Page 48)



# GLARELESS LIGHT

*Protects the Students' Eyes*

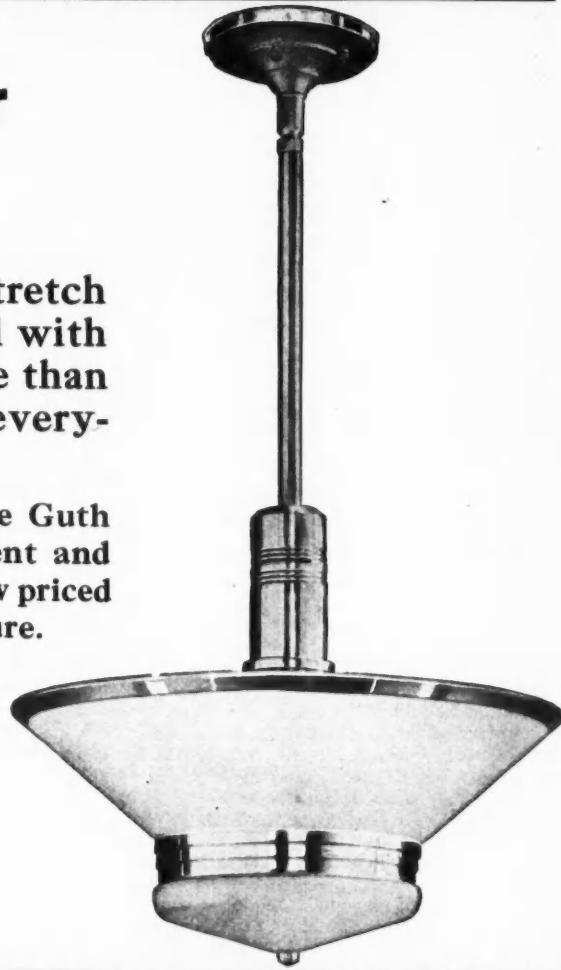
## Guth Super Illuminator gives 20% more light

Staying within the budget, making the dollar stretch as far as possible and still providing the school with equipment that is most efficient, is today more than ever the problem confronting school boards everywhere.

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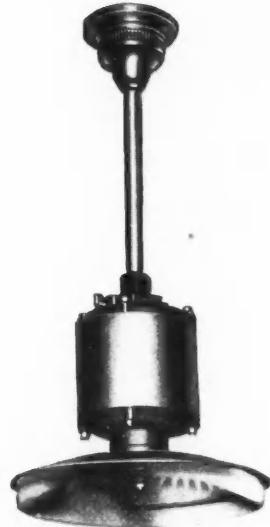
Students are protected from the dangers of eye strain, headache and fatigue, classroom efficiency is increased, due to the widely distributed glareless light the Guth Super Illuminator supplies.

Beautifully styled in oxidized aluminum or porcelain enamelled steel. No screws. No breakage. Simple to install and service. Send coupon for further information.



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Adjustable Safety  
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The only 4-point internal safety globe holder. Holds globe securely thereby lessening danger of breakage. No thumb screws, bushings or compression on globe. Easy to remove — raise cover, tip glassware and it slips out.

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- Non-slip at the Nosing**—where the foot pivots
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*Complete information will be sent on request—no obligation*

NORTON COMPANY,

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T-344

# Alundum Rubber Bonded Safety Tread

(Concluded from Page 46)

for each additional subject, \$15 for the junior high school, and \$10 for the elementary schools. Last year the tuition at each school was \$8, but there were not sufficient pupils to warrant operation.

♦ Oklahoma City, Okla. The school board has appointed Mr. C. K. Reiff, superintendent of buildings, as employment director for the school system. Under the new plan, Mr. Reiff will have charge of the employment and dismissal of building custodians, electricians, carpenters, and other maintenance employees of the schools. The change was made in the direction of centralized control in school affairs.

♦ Norristown, Pa. The school board has adopted a new school calendar, arranged by Supt. H. O. Dietrich. The calendar calls for the opening of the fall term on September 5 and the closing of the spring term on June 22, making a total of 193 teaching days.

♦ Wichita, Kans. The school board has taken steps to float a bond issue of \$1,300,000. The proceeds of the bonds will be used to meet the financial obligations of the schools.

♦ Troy, Ohio. The school board has voted to employ the school janitors on an eleven-month basis, instead of the former twelve-months plan. The action was taken as an economy measure.

♦ Columbus, Ohio. The board of education has been asked to approve a new economy program, calling for the elimination of free textbooks, except for indigent children, a general reduction in salaries, a shortening of the school term, and the assignment of principals to teaching duties. The program, which comprises 25 economy points, was prepared by a committee of school officials, with the co-operation of supervisors and teachers. It was suggested that the schools be closed during the winter months to save on fuel and light bills, as an alternative to closing in the spring or opening late in the fall.

♦ Summit, N. J. The board of education was recently confronted with a concerted effort on the part of state, county, and local taxpayers' league to reduce the cost of education.

The superintendent of schools, Mr. J. B. Dougall, in order to combat opposition created by the taxpayers' league, and to properly inform the taxpaying public of school needs, prepared a series of fourteen large charts, which were mounted and used in a visual-education program for the community. The charts were shown before twelve different groups and endeavored to indicate the growth during the past ten years and the predicted growth for the next five years. Other graphs were exhibited, showing the increase in the school budget and the amount of decrease which had

been effected in the past three years, together with an analysis of the tax dollar, showing its distribution and comparison with ten other communities. In addition, a line graph was displayed, covering a period of ten years, and showing the rise and fall of local tax for the municipal government and for the maintenance and operation of the city schools. The superintendent was able to show a reduction of 30.11 per cent in the tax rate for the next school year.

The charts were studied by the taxpaying parents of school children, and as a result, a new group of parents has been formed to protect the board of education from further inroads and requests from the taxpayers' league.

♦ Winona, Minn. The school board has made a saving of \$2,082 in the janitorial payroll through a 10-per-cent cut in salaries. The payroll for the next year will amount to \$18,728.

♦ Maplewood, Mo. The school board has adopted the two-four plan in place of the three-three plan of organization for the high schools. The new plan is an economy measure, since it allows additional space in the senior high school for the freshman class.

♦ Boston, Mass. The school board has voted to discontinue the privilege of reentry into the service without examination previously enjoyed by teachers who resigned from the service. Beginning with September 1, all teachers who resign and later seek reappointment, will be obliged to take an examination the same as a new teacher.

♦ La Crosse, Wis. The school board has approved a plan of the building committee, providing that the services of regular janitors and engineers shall be dispensed with from June 17 to August 27, to offer employment for others when the regular summer-maintenance program is being carried out. The plan will give employment to from 15 to 20 men for a part of the allotted time. Wages to be paid will be \$115 a month less 10 per cent for mechanical work, and \$65 a month net for common labor.

♦ Whitewater, Wis. The school board has adopted a resolution, providing that the state insurance plan be adopted, with present insurance as a basis. The state insurance bureau has been asked to make an appraisal of the school property in connection with the adoption of the new insurance plan.

♦ Woronoco, Mass. The school board has adopted rules to protect children from the danger of kidnapping. No child, under the rules, will be permitted to leave the school building or grounds during school hours without a personal request made by the parent or guardian. In such a case, the child will not be per-

mitted to leave without the escort of the parent or guardian who made the request.

♦ Oklahoma City, Okla. The board of education has taken action to prevent nepotism in the schools. An affidavit has been attached to each teacher's contract certifying that the teacher is not related to the wife or husband of any member of the school board.

♦ Waverly, Ohio. The school board has eliminated the position of superintendent of schools for the next year. Mr. John Teichert has been employed to head the schools, under the title of supervising principal.

♦ St. Louis, Mo. Henry J. Gerling, superintendent of city schools, has informed the board of education that he will personally guarantee to the amount of \$25,000, school savings of pupils in the St. Louis schools, who had money on deposit in two banks which closed in January, 1933. Recently the attorney for the board held that the board was not liable for the deposits made by school children and that it could do nothing legally about it. The amount involved is approximately \$100,000.

♦ Bridgeport, Conn. The board of education has approved a school reorganization program, providing for a rearrangement of the junior high school, to relieve overcrowding in the senior high school and to keep eighth-grade pupils in their own sections. The plan calls for a rearrangement of classes and for a transfer of principals to new locations.

### MONTANA SCHOOL-BOARD ASSOCIATION MEETS AT HAVRE

The Montana School-Board Association, at its annual meeting held May 5 and 6, at Havre, adopted resolutions thanking the school officials of Havre for their interest and co-operation in arrangements for the meeting, requested the Department of State Lands and Investments to give preference to approved school-district securities in the investment of permanent school funds, asked for a survey of the status of the state equalization fund to determine the beneficiaries of the fund, its condition and standards, and urged that the association promote publicity for the problems of the public schools, seek to provide ample revenues for full-time operation, to protect the permanent school fund, and to secure the enactment of laws to restore permanent school-fund monies.

At the business meeting the following were elected as officers: President, Fritz Roll, Great Falls; first vice-president, Ralph L. Arnold, Missoula; second vice-president, H. Bronjord, Havre; third vice-president, Geo. G. Hoole, Glendive; secretary-treasurer, E. L. Marvin, Billings.

# A Check List for Buying Floor Wax

"Cost economy is the bunk when it leads to junk" — so goes a recent editorial in Boot and Shoe Recorder. And the shoe fits equally as well when it comes to buying quick-drying floor waxes. What is a bargain? A low price looks tempting — but is the saving genuine? Here's a check list that puts the whole problem on a scientific basis. A score card you can use to see how wisely you are buying.

## *Check each point individually*

**1—Ease of Application** . . . Is the wax self-leveling or does it require rubbing to apply and polishing to bring out its lustre? Does it dry bright in 19 minutes like DRI-BRITE Liquid Wax?

**2—Coverage** . . . not claimed coverage on paper but actual floor coverage. Be skeptical. Take nothing for granted. Check results against advertised claims. There's often a joker here.

**3—Wear** . . . DRI-BRITE Wax has deliberately instituted a series of wear tests under the direction of Foster D. Snell, Inc., nationally-known Chemists-Engineers of 305 Washington St., Brooklyn, N. Y. Write them for complete details.

**4—Lustre** . . . How does the finished job look? Do people compliment you — or does the finish quickly become dull and drab? The high carnauba wax content of Dri-Brite makes its lustre actually improve with use.

**5—Preservative Powers** . . . What is the long-range effect of the product on your floors? Is it a real floor preservative like DRI-BRITE Wax or does it eventually cause the surface to fade, bleed or deteriorate, as many waxes do?

**6—Adaptability** . . . Is this a general purpose wax that you can use on all types of floors with equal success? Dri-Brite Wax makes store-keeping and maintenance records easy to keep because it is used universally.

**7—Flooring Manufacturer's Approval** . . . The guarantee on many types of floors is voided when an unapproved wax is used. It certainly pays to investigate before you invest in any wax.

**8—National Distribution** . . . Some day you may want wax in a hurry. Is there a local jobber with ample stocks to serve you? DRI-BRITE is distributed from coast-to-coast through conveniently located jobbers.

**9—Service on Floor Problems** . . . Supposing you run into a difficult application — one on which you would like a little helpful counsel. Does the manufacturer of your wax make such a service possible?

**10—Dependable Source of Supply** . . . Since the introduction of DRI-BRITE, the original self-leveling quick-drying liquid wax, in 1927, hundreds of imitations have appeared. Know your source of supply!

DRI-BRITE Floor Wax	Competitor "A"	Competitor "B"
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Consider all these points. You will find that DRI-BRITE Wax is the really economical wax for you to use. If you wish to convince yourself at our expense, request a free trial can on your letterhead. We will send full information for use without any obligation. Address Miracul Wax Company, 1322 Dolman Street, Saint Louis, U. S. A.

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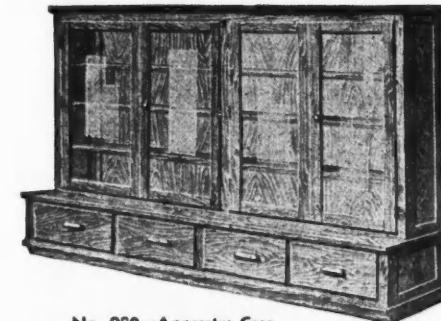
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## EQUIPMENT — CHICAGO

### School Building News

#### State Control of School Construction in California

The Feld Bill, recently passed by the California legislature, is not expected to affect the services of the Division of Schoolhouse Planning of the state education department. The bill was prepared following the earthquake disaster in Long Beach and vicinity and sets up, first, an architect to inspect his own work; second, an inspector to be employed by the architect with the permission of the state architect; third, an engineer to be employed by the architect; fourth, engineers employed by the state architect to check the work of engineers employed by the architect; and fifth, a supervisor to supervise the architect and his supervisor who are charged with the inspection of construction features of buildings erected.

The main purpose of the bill is to give the state architect the power to inspect the structural safety of the schoolhouse plans and to inspect the erection of new schoolhouses as becomes necessary.

Incidentally, the bill requires that a licensed architect must be employed for the plans of any school building costing in excess of \$1,000.

The Division of Schoolhouse Planning will continue to function as in the past, as a division interested in educational planning. The department has been engaged in work on a number of surveys.

#### SCHOOL-BUILDING INSURANCE IN OHIO

The great expense of school-plant insurance in Ohio has been presented in a recent study, compiled in May, 1933, by Dr. T. C. Holy, Professor of School Administration at Ohio State University.

In brief, this report indicates that the total premiums paid in the state during the years 1930, 1931, and 1932 amounted to \$1,347,008. The total fire losses reported during these three years amounted to \$93,778. The excess of premiums paid over losses reported was, therefore, \$1,253,230.

The greatest amount of the premiums was paid in the cities of 5,000 or greater population. The smallest losses, except in 1931, were suffered in these cities. Cleveland, Cincinnati, and Norwood now carry their own insurance and pay losses out of current school-building funds. The figures given above are not al-

together accurate because the premiums included those paid for both fire and storm insurance, while the losses reported include only fire losses. The premiums for storm-risk insurance amounted to only 14.7 per cent of those paid for fire, approximately, so that this fact is not significant.

The findings of the study seem to indicate the necessity of considering the advisability of state fire insurance for public-school buildings.

#### BUILDING NEWS

♦ San Francisco, Calif. The school board has voted to prohibit the erection of three-story school buildings in the future. All new schools will be limited to two stories to allow children to leave quickly in case of fire or earthquake. While this will be the general policy, exceptions may be made in cases where the conditions appear to make it wise.

♦ University education for business is the most popular of specialized training, except that of preparing for teaching, according to Mr. Harold L. Ickes, secretary of the Department of the Interior, in a statement on business education in colleges and universities.

Business education in the university, it was shown, which enrolled fewer than 10,000 students prior to the world war, has increased by approximately 1,000 per cent. More students are enrolled in commerce curricula than in law, theology, and medicine combined. A total of 8,102 students are enrolled in 314 courses in advertising in 176 institutions of higher learning throughout the country. Curricula in which students may specialize in this field are offered in 22 universities.

♦ Logan, Ohio. The school board has recently completed the erection of an addition to the senior high school, at a cost of \$58,000. The building provides space for a gymnasium, an auditorium, a study hall, a music room, four additional classrooms, and rooms for manual arts. It was planned and erected under the direction of Mr. B. M. Coakley, architect, of Nelsonville, Ohio.

This building, which was built on the pay-as-you-go basis, was a joint project of the board of education and the state education department. Its erection has made possible the eventual elimination of some small high schools in state-aid districts, with a substantial saving in operating expenses. At the same time, it affords improved school facilities for the pupils of the city of Logan and the surrounding rural territory.

♦ The University of California, Berkeley, will publish the report of Prof. Fletcher Harper Swift on "The Financing of Public Educational Institutions in France." The report covers the financing of primary, secondary,

and higher institutions in France and will comprise Volume VIII of the University Publications in Education.

♦ Great Falls, Mont. The school board has adopted a report of the building committee, calling for an appropriation of \$8,400 for reconditioning and repairing school buildings. Of the total, \$1,700 will be expended on the high school, and \$6,750 on elementary buildings. The work will include general cleaning and reconditioning, repairs, painting, and varnishing.

♦ Cincinnati, Ohio. The school board has voted to submit the question of contracting additional indebtedness to remodel several schools to the voters at the next election. Under the government proposal, the government offers to pay 30 per cent of the cost of an improvement program, and to be security for a loan of the remaining amount for five years, at 3 per cent interest.

♦ San Luis Obispo, Calif. The board of education has appointed a special committee of four to undertake a complete survey of the city school buildings. The committee is to recommend necessary repairs and improvements for the next school year.

♦ Maplewood, Mo. The school board has completed the erection of an elementary school for Negroes, an addition to an elementary school, and an addition to the senior high school. The cost of the construction was \$156,000, including equipment.

### School Finance and Taxation

#### DENVER SCHOOL EXPENDITURES SHOW 20.4 PER CENT DROP IN TWO-YEAR PERIOD

The actual school expenditures of the city schools of Denver, Colorado, for the budget year December 1, 1932, to November 30, 1933, will be 20.4 per cent less than the budget expenditures for the budget year 1930-31, according to recent estimates of the board of education.

The retrenchments for the year range from 9.7 per cent for teachers' payroll to 95.5 per cent for capital outlay. The fact that the payroll has decreased 9.7 per cent during the current year may be explained by the fact that a general 10-per-cent reduction from the previous salaries was given to teachers at the lower

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level, by the fact that the increments called for in the salary schedule were granted before the 10-per-cent reduction was applied, and by the further fact that only teachers at the maximum levels received a full 10-per-cent reduction.

A decrease of 28.1 per cent was made in the administrative and supervisory service for salary expenditures for administrators and supervisors serving under the superintendent and working out of the administration building.

### FINANCE

♦ Fairhaven, Mass. The school board has voted changes in the physical-training program in order to effect a reduction in the cost of this subject. It is planned to combine the duties of coach and physical director with teaching duties.

The board has taken action toward the elimination of the three-term school year in favor of the four-term schedule. The size of classes in the high school has been increased from 25 to 35 or more pupils per teacher.

♦ Des Moines, Iowa. The school board has adopted a retrenchment program, calling for a reorganization of the administrative staff, the granting of leaves of absence to married women teachers, the closing of the schools for a seven-week period in December and January, and general salary reductions for school employees. The reorganization of the staff calls for the elimination of 64 positions, the placing of 14 teachers on half time, and the granting of leaves of absence to 34 married women teachers, with a reduction of 37 per cent in the cost for supervisors and administrators. The closing of the schools will effect a saving of \$212,139, while salary reductions and elimination of positions will result in a budget reduction of \$364,988.

♦ Woburn, Mass. The school board has adopted a budget of \$256,000 for the school year 1933-34, which is 17.4 per cent below the estimate for 1932. With its latest reduction, the board has effected a total reduction of 20 per cent in school expenses since 1930.

♦ Waltham, Mass. The school board has received a report from a special subcommittee, calling for the closing of the schools for two weeks, next fall or winter, in order to save \$18,000. The action has become necessary in order to meet a cut in the budget demanded by the city council.

♦ Dayton, Ohio. The board of education has voted to coöperate with the citizens' emergency committee in its efforts to collect delinquent taxes. The board has ordered the compilation of a list of teachers and other school employees who have not paid their taxes.

♦ Traverse City, Mich. The school board has

adopted a new plan of school insurance, calling for a reduction in coverage of from \$602,000 to \$470,000, on a 90-per-cent coinsurance basis. The plan is based on an appraisal made some time ago and is expected to effect a saving of \$700 in insurance.

♦ Portsmouth, Ohio. The school board has proposed a number of economies in school operating expenses to offset a 30-per-cent reduction in school revenue due to slow tax collections. In the face of the financial situation, the schools face a drastic reduction in salaries, a curtailment of school activities, and a reduction in the personnel and the school term.

♦ Omaha, Nebr. A greatly reduced school budget will prevent the erection of new buildings, or additions to buildings, during the next school year. The board has planned a number of reductions in operating expenses to effect a saving of \$600,000. Part of the saving will be accomplished by a consolidation of principalships, and increase in the size of classes, reduction in the number of kindergartens, and other operating economies.

♦ St. Louis, Mo. Contributions made by employees of the public schools have enabled over 3,000 pupils to continue in school during the past year, according to a statement of Supt. Henry J. Gerling.

The aid extended to the schools amounted to \$17,113 and was spent for shoes and clothing, carfare, spectacles, and free lunches. This is the second year relief has been furnished pupils. Last year a total of \$13,103 was expended for relief purposes.

♦ Chester, Pa. The school board has taken steps to effect a reduction in the 1933-34 school budget, as an economy measure. The grand total of expenditures for the fiscal year 1932-33 was \$1,030,000 and the board is attempting to reach a new low figure to meet a reduced income due to lowered tax receipts and other conditions attributed to the economic situation.

♦ Battle Creek, Mich. The school board has adopted a budget of \$608,237 for school expenses during the next year, exclusive of debt service and capital outlay. The latter will require \$272,631.

♦ Norfolk, Nebr. For the first time since the school year 1927-28, the public schools were able to go through the year without registering any warrants. The expenditures for current expenses have been reduced from \$224,000 for the year 1930-31, to \$150,000 for the school year 1932-33. The budget for the year 1933-34 will be approximately 10 per cent below the estimate for 1932.

♦ Kalamazoo, Mich. The school board has adopted a drastic economy program for the next year, providing

for a blanket wage cut of 20 per cent, a reduction of the school staff, and a curtailment of school activities. The new budget for the school year 1933-34 provides for an appropriation of \$1,118,430, which establishes a tax rate of \$10.82. The board has inserted a clause in teachers' contracts, which gives it the right to terminate any contract on ten days' notice where the financial situation makes it necessary.

♦ Topeka, Kans. The school board is faced with the problem of operating the schools next year on \$115,000 less than the previous year. The board will effect a reduction in school expenses without the dismissal of regularly employed teachers. It has been suggested that employees of the board donate one month's salary, making a saving of \$80,000. Other proposed economies are salary cuts, a reduction in school supplies and building equipment, and elimination of certain school activities.

♦ Kankakee, Ill. The school board has issued new contracts to teachers, janitors, and other employees, calling for reductions in salary amounting to \$20,000 for the next year. Janitors were ordered to take a payless vacation for the month of June, which would result in a saving of \$1,600. The reductions were made to enable the school board to keep within its budget.

♦ Trinidad, Colo. The school board has adopted an economy program, providing for changes in the school organization to effect a saving of \$10,000 in the year's budget. The saving will be effected by the revision of courses of study, the elimination of two teachers, and other economies. Teachers employed for the next year will have no specific salaries by contract, but salaries will be paid according to the financial situation of the district.

♦ Lincoln, Nebr. The school board has adopted an economy program for the next school year, calling for the elimination of thirty teaching positions, a salary cut of 23 per cent, the discontinuance of a number of school offices, the suspension of the dental clinic, and a possible shortening of the school year. The elimination of the dental clinic alone will effect a saving of \$3,000 in operating costs. The reductions and curtailments have been made to offset a reduction of \$633,329 in school revenue from the income of a year ago which amounted to \$2,416,329.

### SCHOOL BOND SALES

During the month of May, 1933, school bond sales totaling \$1,495,300 were reported. In addition, long-term bonds amounting to \$71,000, for refunding purposes, were sold.

## THE PLATOON-TYPE SCHOOL BUILDING AT ITS BEST

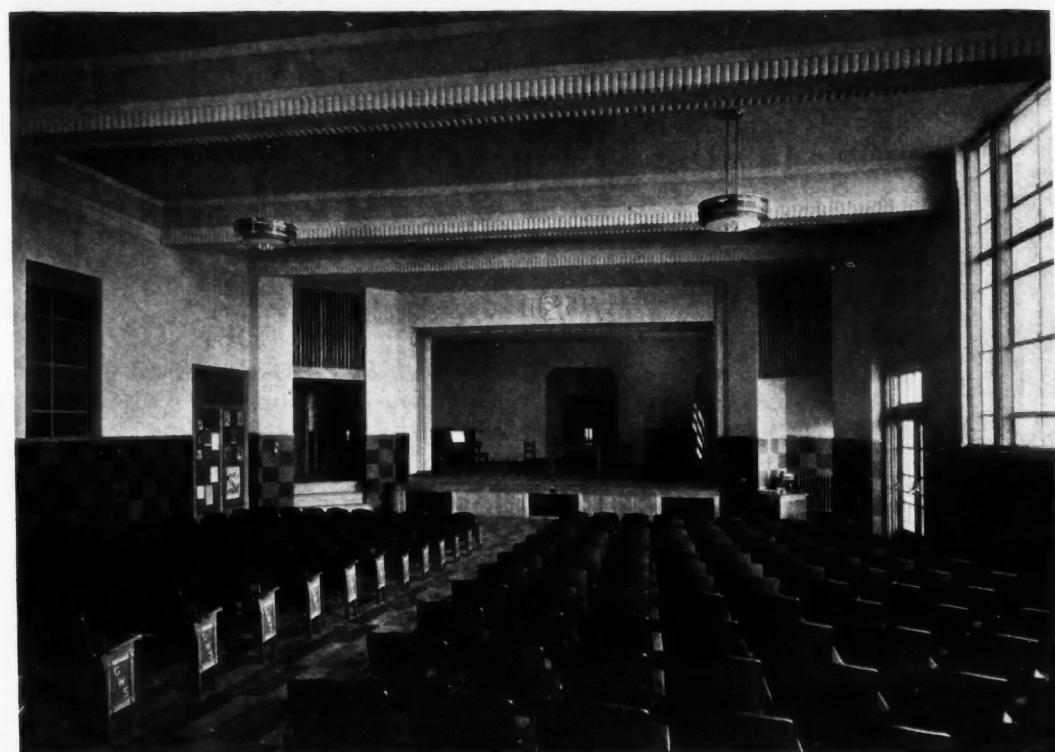
(Concluded from Page 40)

planned, and when extended, the entire building will have only two classrooms not facing east or west. The kindergarten and the nature-study rooms have been placed at the southwest corner of the building, with bay windows facing the south glazed with vita glass, thus insuring maximum health rays for the children of the kindergarten and best growing conditions for plants in the nature-study room.

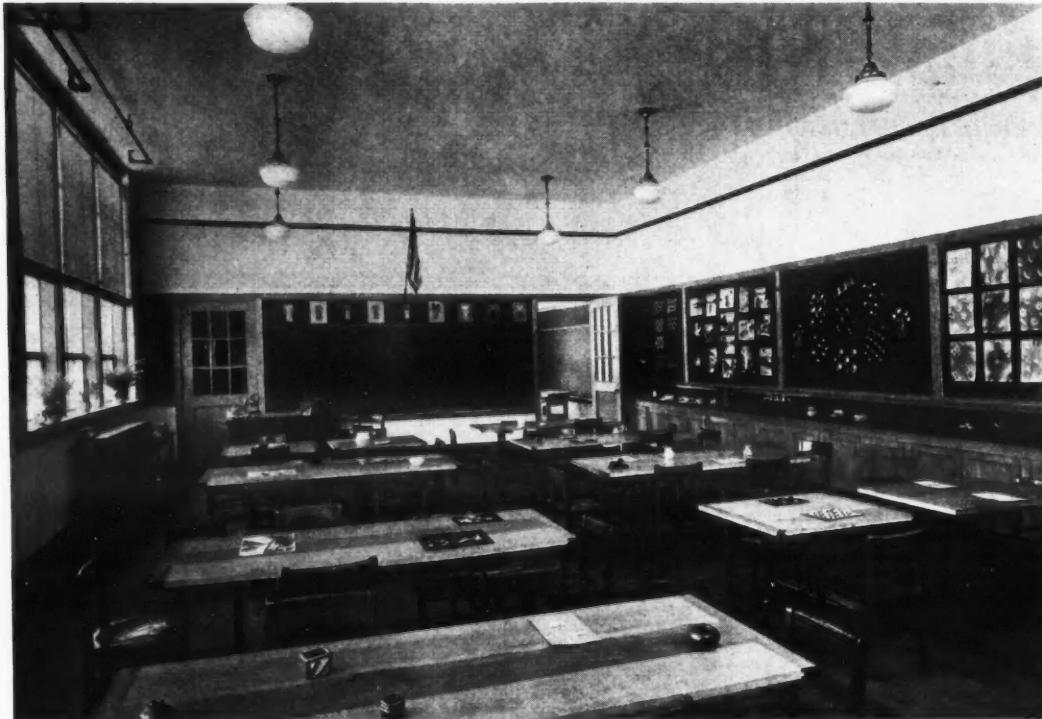
Every classroom and special room, including the auditorium, is equipped with wardrobes, to thus insure the maximum pupil capacity of the building. Special cabinets for storage and equipment, also special display cases have been designed and built into the walls for each special room and have been arranged so as to make a pleasing interior design to each room.

The auditorium contains wardrobes for the accommodations of 120 pupils, a stage and dressing rooms, and has a seating capacity of 360 pupils. The opera chairs have been arranged in groups of three sizes so as to take care of pupils from the first to sixth grades.

The gymnasium, with a maple floor, is divided by folding doors, making separate rooms for the health education of the boys and the girls. The girls' shower and locker room



AUDITORIUM, GEORGE WASHINGTON SCHOOL, LANCASTER, PENNSYLVANIA  
Henry Y. Shaub, Architect, Lancaster, Pennsylvania.



GENERAL ARTS ROOM, GEORGE WASHINGTON SCHOOL, LANCASTER, PENNSYLVANIA  
Henry Y. Shaub, Architect, Lancaster, Pennsylvania.

adjoining the girls' side of the gymnasium includes 42 dressing rooms, 21 showers, and an instructor's room; the boys' shower and locker room at the opposite end of the gymnasium includes lockers for 50 boys, gang showers, a drying room, and an instructor's room.

The kindergarten, as before stated, is placed at the southwest corner of the first floor. Directly outside of this room has been placed the kindergarten playground with a door leading directly into the room through the bay facing south. The kindergarten is paneled to a height of seven feet with cork-carpet panels. Included also in this room is a fishpond with a fountain, also special cabinets designed for the storage of each pupil's project work. The floor of this room is covered with linoleum laid in special designs for the kindergarten circle, deck shuffle board and various other games.

The finished floors throughout the building, except the kindergarten and gymnasium, are covered with asphalt mastic tile laid in special patterns and in a wide range of colors. The wainscot in all corridors and large toilet rooms

is vitreous tile, and the floors of all toilet rooms and wainscot of small toilet rooms are tile laid up in colored patterns. The interior woodwork throughout the building is oak finished in silver-gray.

The entire building is heated and ventilated by the unit system, and the boilers are equipped with automatic stokers. All toilet fixtures are equipped with seat-action flush valves and all lavatories with timed, self-closing faucets. The showers are equipped with automatic temperature-control valves insuring water of the temperature required. The drinking fountains located in the corridors have been placed at various heights to suit the size of the pupils. The playgrounds are oil-bound macadam.

The building contains 769,457 cubic feet and was erected at a cost of 22 cents per cubic foot. The contract was awarded March, 1932, and the building was completed January 1, 1933.

The educational planning of the building was done by Harry E. Gress, superintendent of schools in the city of Lancaster, and the architect was Henry Y. Shaub, Lancaster, Pa.

## DENVER PROMOTES WORTH- WHILE LEISURE OF HIGH-SCHOOL GRADUATES

*Denver Progressive Youth, Associated.* That is the name chosen by an organization of approximately six-hundred high-school seniors of Denver who have banded together to solve the problem of maintaining, since their graduation in June, a program of activities that will provide for them worthwhile use of the leisure that the economic situation is likely to thrust upon them.

The movement was begun April 4 by a group of adults, all of them leaders in the educational and cultural life of Denver. From this group a smaller committee was formed, which in turn met with representatives of the senior classes of the various high schools of the city. These seniors met with their classmates, formed committees in each school, and have since launched a program destined to provide educational, recreational, cultural, vocational, and community-service activities for the hundreds of young people who have signified a desire to participate in the movement.

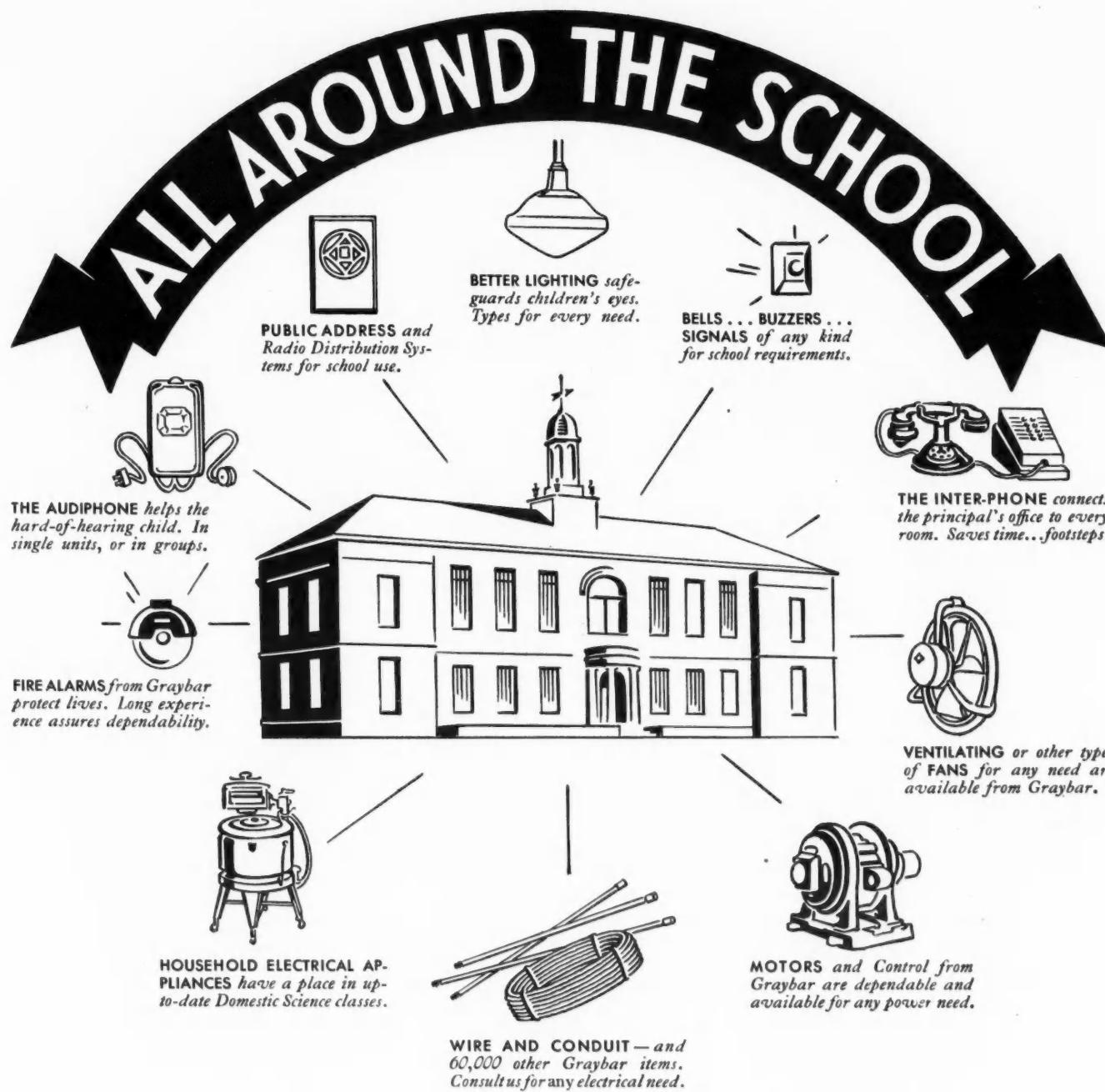
A major committee of five seniors has headed the work in each high school.

Approximately 40 per cent of the pupils graduating from the senior high schools of Denver in 1931 went on to college. Principals of the Denver high schools estimate that not more than 30 per cent of the 2,100 graduates of 1933 will enter college in the fall, and that 70 per cent, or approximately 1,500 of these seniors, hope to find employment.

In the light of present employment conditions, the outlook of these 1,500 graduates presents a community-wide problem, the solution of which is being attempted by this co-operative movement of various organizations of Denver and the young people themselves. — A. Helen Anderson.

### NEWS OF OFFICIALS

- Mr. J. G. HUNTOON has been re-elected as president of the board of education of Rock Island, Ill.
- Mr. E. G. BEARDMORE has been re-elected as business manager of the school board at Oshkosh, Wis.
- Mr. GEORGE PORTER has been elected president of the school board of Columbia, Mo. He succeeds Judge N. T. Gentry, who has resigned.
- Mr. W. O. TATUM, Mr. E. B. CONN, and Mr. E. C. POLK are the new members of the school board at Hattiesburg, Miss.
- Mr. EDWIN A. KERR, president of the board of education of Seward, Pa., died at his home following a six months' illness.
- Mr. H. R. KRATZ has been re-elected as secretary of the school board of Norristown, Pa. Mr. JOHN WAGNER was re-elected as treasurer.
- Mr. H. E. BENDURE, of Van Wert, Ohio, has been elected superintendent of schools at New Bremen. He succeeds A. M. Archer who has resigned.
- The school board of Moline, Ill., recently adopted resolutions expressing appreciation to Mr. LEWIS A. MAHONEY, retired superintendent of schools, for his eighteen years of service. Mr. Mahoney, who retired in 1931, had served in an advisory capacity during the past school year, but was not re-employed for the next year.
- Mr. E. P. SMITH, of Martin, Tenn., has been elected superintendent of schools at Milan, to succeed W. R. Reed, who has resigned.



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**PERSONAL NEWS**

• MR. D. R. BENDURE, of Van Wert, Ohio, has been elected as superintendent of schools at New Bremen, to succeed Frank Loy.

• Supt. JOHN MICHAEL, of Eaton, Ohio, has been reelected for the next school year.

• MR. ROY WALTERS has been elected superintendent of schools at Potterville, Mich., to succeed D. G. Lock.

• MR. A. J. DUNCANSON, of Mt. Pleasant, Mich., has been elected superintendent of schools at Sandusky, Mich., to succeed H. T. Mills.

• MR. R. W. SHEEK, of Guilford, Ind., has been elected superintendent of schools at Franklin, to succeed Arthur Campbell.

• MR. L. W. ARBURN, of Bloomington, Ind., has been elected superintendent of schools at Cambridge City, to succeed Emerson Cloyd.

• MR. B. H. GIBBON, of National City, Calif., has accepted the superintendency at Alhambra. Mr. Gibbon is a graduate of the State Teachers' College of Aberdeen, S. Dak., and holds degrees given by the University of Minnesota and the University of Southern California.

• MR. H. R. PETERSON, of International Falls, Minn., has been elected superintendent of schools at Albert Lea, to succeed A. L. Gaarder.

• DR. RALPH W. SWETMAN, of the State Teachers' College, Temple, Ariz., has been appointed as principal of the State Normal School, Oswego, New York, to succeed Dr. James G. Riggs.

• MR. G. W. LEMAN, of Wakefield, Mich., has been elected superintendent of schools at Bessemer, to succeed C. R. Cobb.

• MR. W. A. OLMSSTED, of Durant, Iowa, has been elected superintendent of schools at Harpersville, N. Y.

• DR. EUGENE A. COLLIGAN, associate superintendent of schools of New York City, has been elected president of Hunter College, to succeed Dr. J. M. Kieran.

• MR. C. P. MINEAR, of Georgetown, Colo., has taken the superintendency at Idaho Springs.

• MR. C. R. DUSTIN, of Maple Heights, Ohio, has been elected superintendent of schools at Ravenna, to succeed O. E. Pore.

• MR. J. P. GIRARD, of Pittsboro, Ind., has been elected superintendent of schools at the Guilford township schools, to succeed R. W. Sheek.

• DR. HAROLD WILLIS DODDS, professor of politics and chairman of the administrative board of the school of public and international affairs, has been elected as the fifteenth president of Princeton University. Dr. Dodds is an alumnus of Groves City College and holds degrees given by Princeton University and the University of Pennsylvania. He had served as an instructor at Purdue, Swarthmore, Western Reserve, Pennsylvania, and New York Universities and had been professor of politics at Princeton since 1927.

• MR. G. W. GREENE, of Anacortes, Wash., has been elected superintendent of schools at Sedro-Woolley.

• DR. DEFORE CRAMBLIT, who succeeds Mr. G. W. Greene at Anacortes, Wash., was formerly principal of the high school.

• DR. W. E. ROSENSTENGEL, of Columbia, Mo., has been reelected as superintendent of schools for a three-year term, beginning with July 1.

• DR. JAMES DAUGHERTY, of Columbia, Mo., has been reelected as supervisor of elementary education in the public schools.

• DR. WILLIAM JOHN COOPER, United States Commissioner of Education since 1929, has resigned, in order to accept a position as Professor of Education at George Washington University where he will direct the courses in educational administration. As Commissioner of Education, Dr. Cooper added a number of new lines of work to the Office of Education. During his incumbency also, three national surveys of education were carried on under his direction. He had the opportunity to become acquainted with educational conditions in practically every state of the Union.

• Supt. O. J. KORB, of South Euclid, Ohio, has been reelected president of the Kent State College Alumni Association.

• CHARLES H. LAKE, assistant superintendent of schools of Cleveland, Ohio, has been elected superintendent, to succeed R. G. Jones. Mr. Jones will assume a new position as director of public relations on September 1.

• MR. J. W. FAUSEY, of Gibsonburg, Ohio, has been elected superintendent of schools at Clyde, to succeed A. J. Love.

• MR. EDMUN L. BOYER, principal of the Bloom Township High School, Chicago Heights, Ill., on May 25, was the guest of honor at an anniversary program in celebration of his twenty-fifth anniversary as principal of the school.

The program which included speeches and music, was in charge of Mr. M. L. Slugg, of the Bloom high-school board. Among the speakers were Mr. David Wallace, a former board member, Mr. Clarence Berolzheimer, a member of the class of 1909, Mr. W. P. Dyer, member of the school faculty, Mr. J. N. Gansen, president of the elementary-school board, Supt. Floyd T. Goodier, Mr. H. W. Adair, president of the Bloom board, and Mr. C. H. Kappmeyer.

Mr. Boyer was presented with a silver plaque, suitably engraved, as a token of appreciation of his devoted services as principal from 1908 to 1933.

Mr. Boyer, who is now past 70, has held a rather unique position in the local community. He has appeared frequently on educational programs and two years ago was on the summer program of the National Education Association.

• Supt. H. C. BALES, of Milford, N. H., has been reelected for the next school year.

• Supt. A. B. KELLOGG, of Claremont, N. H., has been reelected for another year.

• DR. WILLIAM H. BUKER, of Rochester, N. H., has been elected superintendent of schools at Shelburne Falls, Mass.

• Supt. J. E. ANDERSON, of Mankato, Minn., has been reelected for a two-year term, beginning with July 1.

• DR. F. M. TONGE, formerly supervising principal, has been elected superintendent of schools at National City, California, for a two-year term.

• DR. VINCENT M. McCARTIN, junior submaster in the high school at Lowell, Mass., has been elected superintendent of schools for the next year. Mr. McCartin, who succeeds the late Hugh J. Molloy, has been connected with the school system since 1922.

• DR. MABELLE B. BLAKE, formerly associate professor of education at Smith College, has been appointed president of the

# SCHOOL PAPERS •

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Chicago Teachers' College. Dr. Blake, a graduate of Harvard University, is the first to serve in that capacity in the institution.

• DR. J. G. BARTON, of Muhlenberg township, Darbyville, Ohio, has been elected superintendent of schools of the Scioto township schools at Scioto.

• DR. ARTHUR LEE, superintendent of schools at Clinton, Missouri, for the past 31 years, has been reelected for a new term of two years.

• Supt. HARRY A. BUEK, of New Albany, Ind., was the guest of honor at a banquet given on May 8, in celebration of his seventieth birthday and his twenty-fifth anniversary as superintendent of schools. Superintendent Buerk was presented with a chair as a gift of the guests.

• Supt. H. H. DRUHOT, of Lebanon, Ohio, has been reelected for a three-year term.

• Supt. T. W. GOSLING, of Akron, Ohio, has been reelected for a five-year term, at a salary of \$7,500 a year.

• DR. B. R. JONES, of Spencer, Iowa, has been elected superintendent of schools at Creston.

• DR. T. A. HARMON has been elected president of the Southern State Normal School at Springfield, South Dakota. He succeeds C. G. Lawrence, who goes to the Northern Normal School on July 1.

• DR. FRANK MORGAN, of Wichita Falls, Tex., has been elected superintendent of schools at Honey Grove. He succeeds W. E. Cantrell.

• DR. JOHN M. MUNSON, of the Northern State Teachers' College, Marquette, Mich., has been appointed president of the Michigan Normal College at Ypsilanti. He succeeds Dr. Charles McKenney, who has become president emeritus.

• DR. DONALD W. MACKAY, of Raton, New Mexico, has resigned, after completing five and a half years of service in the schools. Mr. MacKay plans to attend Columbia University during the coming year.

• DR. C. V. COURTER, of Dayton, Ohio, has been reelected for a term of five years, beginning with September 1.

• DR. C. T. PROSE, of Zanesville, Ohio, has been reelected for a term of five years.

• DR. H. E. WAITS has resigned from the superintendency at Ludington, Mich., after the completion of fourteen years' service.

• DR. H. G. BOREN, of Hubbard, Ohio, has been elected superintendent of schools at Ravenna.

• DR. A. R. ROUSH, of Brookville, Ohio, has been reelected for another year.

• DR. G. W. LEMAN has been elected superintendent of schools at Bessemer, Mich. Dr. Leman had recently served as an instructor at New York University while completing his work for a doctor's degree.

• DR. R. H. PLOEGER, of Bancroft, Mich., has been elected superintendent at Ubly.

• DR. ARTHUR CAMPBELL, of Franklin, Ind., has been elected superintendent of schools at Anderson. Mr. Campbell succeeds W. A. Denney.

• DR. HARRY A. BURKE, of Kearney, Nebr., has been elected president of the Nebraska Schoolmasters' Club, following a meeting of the club held on May 13.

• DR. R. B. KNIGHT, of Chandler, Okla., has been reelected for another year.



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## Book News

## Our Continental Neighbors

By Albert P. Brigham and Charles T. McFarlane. Cloth, octavo. Illustrated, 400 pages. \$1.52. American Book Company, New York City.

This is Book Three of 1933 revision of the well-known Brigham and McFarlane geographies with the general title, "Our World and Ourselves." Book Three, *Our Continental Neighbors*, intended for the sixth grade, takes up the study of all the inhabited continents except North America. The latter continent is treated in detail in the fifth-grade book, *Our Home State and Continent*.

Europe and South America are given special emphasis because of their important relation to our own country. Throughout the book it is evident that a definite attempt has been made to relate industrial and commercial facts with the climate, physical features, and natural resources. There are 22 colored physical and political maps, 71 black-and-white maps, and numerous well-chosen pictures reproduced from photographs.

The pictorial illustrations are well chosen as teaching aids and the purpose of each is definitely fixed by a commentary caption. There is much drill in map study based upon features that explain the facts studied. Many thought questions and projects guide teacher and pupils in their study.

## High-School English — Book Two

By Henry S. Canby, John B. Opdycke, and Margaret Gillum. Cloth, 649 pages. The Macmillan Company, New York City.

Book Two, similar in style and plan to Book One of the series, is intended for the tenth grade. The student is led gradually to understand the nature and necessity of the rules and devices pertaining to the various forms of written and oral discourse.

The first chapters wisely are devoted to motivation, inspiration, and examples. Formal grammar and rules of composition bring up the rear. A brief history of the English language forms a fitting and valuable introduction. The chapter on Words and Their Use is well done and that on Poetry offers definitions, discussion of the appeal of poetry, the mechanics of verse, figures of speech, and examples of poetry both professional and amateur.

## Housekeeping for Janitor-Engineers

By Lawrence Parker. Paper, 81 pages, 8 by 11 in. Kansas State Teachers' College, Pittsburg, Kans.

The development of vocational education and the improvement in teaching methods of all trade and occupational subjects has been reflected in the janitor-engineer schools established in a number of larger cities and in state institutions of at least two commonwealths. In Kansas, an outstanding job of analyzing the duties of janitors in the fields of (a) heating and ventilation, (b) housekeeping, (c) repairwork, and (d) care of grounds has been done under the guidance of Mr. Lawrence Parker, director of the summer section janitors' schools.

The present publication is a carefully organized series of job and information sheets in school housekeeping. The cleaning of school interiors has been analyzed as consisting of 48 distinct jobs or types of work. Each of these jobs has been broken down into standard operation steps which must be taken in the sequence and manner indicated in the lesson sheets, if the best results for time-saving and cleanliness are to be achieved. Eleven information sheets are included in the book to describe in detail the quality, size, and form of the tools and materials which have been found especially adapted to schools.

The use of these lesson or job sheets would systematize any program for the improvement of janitorial service. In the hands of a competent teacher who can demonstrate each of the jobs, and who will patiently observe and criticize the members of a class, the job sheets leave nothing to be desired in the form of basic instructional material. Perhaps the strongest feature of the course is its insistence upon the use of standard, generally obtainable tools and cleaning materials.

## Taxation Issues

By M. Slade Kendrick. Cloth bound, 147 pages. Price, \$1. Published by Harper and Brothers, New York City.

This book deals with taxation issues with special reference to state and local problems. The importance of the subject is demonstrated in the opening chapter where the author shows that the combined federal, state, and local per-capita tax has increased from \$17.26 in 1890 to \$67.50 in 1930. He contends that while taxes were 7.2 per cent of the national income they have risen to 16 per cent in 1931.

He then points out the general clamor for new tax sources, and analyzes the income, individual, corporate and otherwise, which has gone toward the maintenance of government. The revenues have, in their entirety,

declined materially. The author devotes a chapter to the general property tax in which he shows that this method of raising public revenues has been carried to the breaking point. He also analyzes the relations between state and local taxation, and winds up with a discussion on the problems of taxation in broader aspects.

## First Year Book of School Law

By M. M. Chambers and others. Paper cover, 106 pages. Price, \$1. Published by M. M. Chambers, Columbus, Ohio.

This volume consists of "a narrative topical summary of decisions of the higher courts in all states of the United States of America in cases involving school law," as reported in 1932. Chapter one, for instance, brings out the late court decisions on cases bearing on the relation of pupils and the school authorities, such as residence, tuition, transportation, attendance officers, kindergartens, and the right to exclude students. The thirteen subsequent chapters deal with teachers, boards of education, taxes, school districts, school lands and funds, private schools.

The book does for the school field what West's National Reporter System does for case law in general. The logical, orderly arrangement and the brevity of the work makes the record of the year readily accessible. The fourteen editors who collaborated in the work have not done entirely harmonious work, but they have all understood the fact that the users of the book are not lawyers and have expressed the principles in the decisions quite clearly for the average layman. As a permanent reference the yearbook will gain real value as the second and subsequent yearbooks appear. It is hoped that school boards will recognize the value of this work by purchasing copies to the extent that the permanence of Dr. Chambers' work will be assured.

## Teaching Nutrition to Boys and Girls

By Mary Swartz Rose. Cloth, 198 pages. Published by The Macmillan Company, New York City.

The importance of health in rearing the youth is argued in the introduction of this book so convincingly and conclusively as to leave no room for doubt. The book is intended for use of the teachers. The lessons deal with every phase of the nutrition problem.

Food values are discussed in a manner to bring home to every child the things that will make for its physical welfare. Milk and other food products are analyzed. The meaning of calories and vitamin is well explained.

## Quakers and Indians

A story of William Penn for boys and girls to read and play. By S. Lucia Keim. Cloth, illustrated, 47 pp. The John C. Winston Company, Philadelphia.



## The 2500 Series—Most Popular Design

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classrooms and libraries, through the university, with this series of chairs. Made from hard maple, finished in school furniture brown, all edges rounded, posturally correct and with Wittliff Braces as regular equipment, the 2500 Series of Chairs will meet your specifications for beauty, comfort, strength, and durability. Ask for further details.

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**The Work of the Little Theatres.** By Clarence Arthur Perry. Cloth, 228 pp. \$1.50. Russell Sage Foundation, New York City.

This is a vaguely generalized study of the work of the little theatres, covering a period from 1925 to 1929, and a rather hopeless attempt to classify "the groups they include, the plays they produce, their tournaments, and the handbooks they use."

The greatest strides in the little theatre movement have been made within the last two or three years, facts concerning which have not been taken into account.

If the compilation is intended as a general survey of the little theatre movement—its aims, accomplishments, and trend—then the study is inaccurate and incomplete. No attempt has been made to classify satisfactorily the various groups or types of little theatres. Consequently, the generalized statements have no specific application and the lists and tables are not representative of the work of the little theatres.

**Newlon-Hanna Spelling Notebook.** Paper, 80 pages. Houghton Mifflin Company, Boston. This notebook affords an opportunity for carrying on a continuous program of testing the pupil's spelling, of studying words misspelled, and reviewing lessons successfully learned in the past.

**Easy Work and Play Books.** By Inez Howard, Alice Hawthorne, and Walt Howard. Primer, paper, 64 pages. Book I, 96 pages. Follett Publishing Company, Chicago. Purposeful seat-work in which silent reading, color study, cutting and matching, and pasting is combined. Vocabulary building is strongly emphasized.

**Introductory Geography for Teachers College Students.** By Earl E. Lackey. Paper, 132 pages. Published by the author, University of Nebraska, Lincoln, Nebr. A method of selecting and evaluating materials for a professional subject-matter treatment, with emphasis on the home region. A summary of the author's research work on the problem. There is a bibliography of geography texts for elementary and secondary schools and colleges, and books on education which contain references to geography teaching.

**Art Stories, Book I.** By W. G. Whitford, Edna B. Lick, and W. S. Gray. Cloth, 144 pages. Scott Foresman and Company, Chicago.

Three outstanding specialists in reading and an impressive array of six modern book illustrators have contributed to this the first of a series of supplementary art readers. The book is closely correlated to the Elson basic readers and parallels similar series of health, number, and nature readers.

**Directed Geography Study.** By Robert M. Brown and Mary T. Thorp. Book One: *The Western Hemisphere*, Paper, octavo, 192 pages, 56 cents. Book Two: *The Eastern Hemisphere*, 184 pages, 56 cents. World Book Company, Yonkers, N. Y.

The two books of *Directed Geography Study* are workbooks for the fifth and sixth grades, respectively. The exercises are divided into units, each requiring eight or ten days of work. There are usually four sections in each unit; i.e., orientation exercises, independent study, activities, summary.

The purpose of these workbooks is to enable the teacher to utilize the most modern methods of teaching geography with present available material. They may be used with any single basal text or, as the authors recommend, with several texts. In each unit are listed all the widely used geographies with reference to pages for study.

Questions, topical outlines, map exercises, graphs and tables, etc., comprise the problem material. New-type tests are used in the summaries. Space is provided for pupil's notes and original work, and there are many outline maps.

**Cataloging of Children's Books.** By Elva S. Smith. Paper, 23 pages. Price, 25 cents. The present pamphlet has been prepared to meet the need for a separate catalog of children's books. It meets a distinct need because it makes it easier for children to use a small catalog, and because instruction in the use of the catalog is simplified. The chief value of the catalog lies in the freedom given in the analysis of books and the assignment of subject headings. It is especially useful for schools where there is no professional librarian and where professional library service is not available.

**A Comparison of Real Estate and Public Utility Valuations in Ohio City, Village, and County School Systems, 1931-32.** Prepared by T. C. Holy. Issued by the Bureau of Research, Ohio State University. The figures show a 10-per-cent reduction in real estate valuations and reveals various changes in the tax laws for 1931. The data for the report was taken from abstracts submitted by the county auditors to the state tax commission.

**Representative School Buildings.** Paper, 108 pages. State Department of Education, Olympia, Washington. This valuable bulletin presents representative school buildings erected within the past ten years in the State of Washington. These illustrate a high order of architectural design and construction and a very careful adaptation of plan and equipment to the educational purposes. An introductory chapter discusses the school-building program, the planning of buildings, and the selection of architects. The entire book is distinctly helpful and should result in a higher appreciation of good schoolhouse design and planning.

**Compositions for Violin and Piano, Octavo Choruses for Female and Mixed Voices, and School Choruses.** By Carl Fischer. Carl Fischer, Inc., New York. A series of compositions for school choruses, music classes, and other schoolwork.

**Unit Levies and Costs, 1930-1932.** Prepared by R. C. Williams. Bulletin No. 11, March, 1933, State Department of Public Instruction, Des Moines, Iowa. School executives who do not keep a file of these bulletins find it impossible to obtain such data which may be used for comparative purposes without further correspondence with the state department's office. The data contained in this report shows the main tendencies for the school years 1930-31 and 1931-32, and is intended to be of help to school administrators in evaluating the financial program and in preparing school budgets.

**Determining Per-Pupil Costs for Tuition Purposes.** By R. C. Williams. Bulletin No. 13, May, 1933, State Department of Public Instruction, Des Moines, Iowa. A study of the tuition question involves ways of determining what items should be included in arriving at cost figures. The present report offers an outline for use as a basis in determining the annual per-pupil cost for tuition in the elementary and secondary schools of Iowa. It includes methods of computation and gives the bases for allocating the total costs to departments. A valuable document for these days of changing costs.

**A Modern Spanish Course.** By A. C. Clark and W. O. Williams. Part I, 8vo, cloth, 184 pages; Part II, 156 pages. Published by The Peter Reilly Company, Philadelphia, Pa. These books contain practical everyday words and phrases. Part

I is lessons for reading and translation, with special grouping of words for memorizing work. There are lists of idiomatic expressions and proverbs which usually have to be learned by residence abroad. The exercises are copious to help the student in obtaining a complete mastery of each section. Part II offers a fairly complete view of Spanish grammar, especially of those finer points, including the subjunctive, which are necessary to more advanced students. The work has been made practical for the student who desires a knowledge of the language for cultural purposes, and for those who wish to be able to handle it for business purposes.

**Oxidation and Reduction.** By H. I. Schlesinger and H. B. Lemon. Paper, 28 pages. Price, 35 cents. The University of Chicago Press, Chicago, Ill. This guide for use with educational sound pictures has been produced for the University of Chicago by the educational research staff of Eripi Picture Consultants, of New York City. The guide is based upon research findings in the utilization of sound films and is intended to enrich courses as they are now taught, rather than to prescribe methods or procedure for instructors to follow.

**Molecular Theory of Matter.** By H. I. Schlesinger and H. B. Lemon. Paper, 28 pages. The University of Chicago Press, Chicago, Ill. This is one of twenty productions being prepared from material included in the freshman and sophomore courses in physical sciences being offered by the University of Chicago.

**Biennial Report of the Public Schools of Dayton, Ohio, for the Period of 1930-1932.** This report contains an outline of the changes and developments which have taken place in the administration of schools during the two-year period. It reviews also the activities of the several departments and presents certain important statistics.

**Rules and Regulations of the Board of Education.** Oswego, New York. A compilation of the rules for the government and control of the Oswego Public Schools, including teachers, principals, supervisors, and members of the board of education.

**Financial Status of Ohio City and Exempted Village School Districts.** By T. C. Holy and D. H. Sutton. Paper, 72 pages. Bulletin No. 13, 1932, of the Bureau of Educational Research, Ohio State University, Columbus. The financing of educational programs and the abilities of different communities to bear the necessary financial burden are frequent topics of consideration. The present study, conducted by two well-known members of the research staff of the Ohio University, is divided into two sections. Section I takes up School Bonded Indebtedness and Taxation Rates, and Section II is devoted to a study of the Amount, Purpose, and Disposition of Bond Issues and Special Levies. The findings indicated that the efforts of school authorities to provide satisfactory housing for the pupils of the public schools in all types of districts have been well supported by the electorate of the state. The results showed that the voters are authorizing the requests for expenditures of capital outlay and additional operating revenues. While a number of bond issues and special levies deserved to fail on their merits, a number of others failed because of insufficient and poorly prepared information for the voters.

**The Story of Our Calendar.** Paper, 32 pages. Price, 10 cents. Pamphlet No. 4, of the American Council on Education, Committee on Materials of Instruction, Chicago, Ill. A study of time reckoning and of the progress made in calendar making.

## Dependable School Scissors For All Grades

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### PERSONAL NEWS

- SUPT. R. A. BULL, of Watertown, Wis., has been reelected for a tenth consecutive term.
- SUPT. D. C. JENSEN, of Jordan, Utah, who retires this year as superintendent of schools after sixteen years' service, was honored by a reception given by the school patrons, teachers, and board members. Mr. Jensen was presented with a gold watch and chain.
- MR. M. P. MOE, state high-school supervisor of Montana, has been appointed as executive secretary of the Montana Education Association. Mr. Moe, who succeeds R. J. Cunningham, takes over the duties on August 1.
- SUPT. C. E. FISCHER, of Braintree, Mass., has been reelected for the 1933-34 school term. Mr. Fischer has completed twelve years as head of the school system.
- MR. G. E. LOOMIS has been elected superintendent of schools at Big Rapids, Mich., to succeed J. W. Kelder.
- MR. E. H. LANDIS, assistant superintendent of schools at Dayton, Ohio, has been named a member of the Commission for Secondary Schools of the North Central Association of Colleges and Secondary Schools.
- MR. P. D. CANNANAN, superintendent of schools at Bettsville, Ohio, will enter the State University, where he will take a summer course in school administration.
- MR. L. M. HRUDKA, professor of education at the South Dakota State College, has been elected as superintendent of the Morton High School at Cicero, Ill.
- MR. H. W. HODSON, superintendent of schools at Wilmington, Ohio, has been reelected for a five-year term.
- LIVINGSTON C. LORD, 81, president of the Eastern State Teachers' College at Charleston, Ill., died at his home on May 15, after a brief illness. Dr. Lord had been head of the college since its dedication in 1899.
- SUPT. P. E. WALLACE, of Mt. Pleasant, Tex., has been reelected for a thirteenth consecutive term. Mr. E. C. BRICE, principal of the high school, was also reelected for another year.
- MR. A. G. STEELE has been elected superintendent of schools at Altus, Okla.
- MR. C. PAINE SHINGLE, of Sedro-Woolley, Wash., has been elected superintendent of schools at Bellingham, to succeed D. E. Wiedman.
- PROF. WILLIAM F. GEIGER, a member of the faculty of Dartmouth College, and former superintendent of schools at Tacoma, Wash., has been appointed as a member of a group of Americans on a commission named by the Schurz Foundation to study municipal conditions affecting the German schools. Mr. Geiger will make a study of public education in German and Austrian cities.
- SUPT. W. H. ANGEL, of Dennison, Ohio, has been reelected for a two-year term.
- MR. A. M. McCULLOUGH, of Lyon, Kans., has been elected superintendent of schools at Fairfield, Conn. Mr. McCullough succeeds W. E. Smith, who has resigned.
- SUPT. U. L. LIGHT, of Barberton, Ohio, has been reelected for a term of five years, at a salary of \$4,500 a year.
- MR. WILLIAM A. WELCH has been elected superintendent of schools at Peabody, Mass., to succeed T. W. Sheehan, who has resigned.
- SUPT. EARLE T. TRACEY, of Nashua, N. H., has been reelected for the next year.

## The School Envelope Specialists

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BACK of us a long history of applying our splendid factory facilities to school requirements. We produce envelopes for all school uses such as filing, report cards, print shop and general administration purposes. They are available in all staple sizes and paper stocks, plus hundreds of made-up specialties. Consult with us. We will gladly submit samples and prices.



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• MR. O. J. TAYLOR has resigned as president of the Chicago board of education, after completing a year's service. Mr. Taylor gave the press of private business as a reason for his resignation. Mr. Taylor was elected president of the board last February, following the resignation of Lewis E. Myers.

• MR. MILTON J. BRUSH has been reelected as president of the school board of Lafayette, Ind.

• MR. E. L. BERSAGEL, of Wakonda, S. Dak., has become a member of the faculty of the Northern Normal School at Aberdeen. Mr. FRANK PORTCHNER, formerly principal of the high school at Wakonda, succeeds Mr. Bersagel.

• MR. JOHN W. SAHLSTROM, of Norfolk, Nebr., has been elected superintendent of schools at Elmira Heights, N. Y. Mr. Sahlstrom succeeds H. H. Beach, who goes to Sayre, Pa.

• SUPT. R. C. CLARK, of Seymour, Conn., has been reelected for another year.

• MR. J. S. KADESCH, of Medford, Mass., has been reelected for another year.

• MR. JOHN C. OTIS, superintendent of schools at Williamsburg, Mich., died in a hospital at Traverse City, on June 5, following an operation. He was a graduate of the Central State Teachers' College and of Michigan State College, and had been superintendent of schools for the past four years.

• MR. RALPH HATHAWAY, of Bloomville, Ohio, has been elected superintendent of schools at Dalton.

• SUPT. R. G. JONES, of Cleveland, Ohio, has been honored by Columbia University with the presentation of the Butler medal for excellence in public-school administration.

• The school board of Sylvania, Ohio, has discontinued the office of superintendent of schools and has placed the schools under the direction of J. W. WHITMER, county superintendent of schools.

• MR. N. K. WEIMER, superintendent of schools at Beach City, Ohio, has been presented with Verdun Medal by the French Commission, for meritorious service on the Verdun front.

• MR. JOHN GRANRUD, assistant superintendent of schools of Springfield, Mass., has been elected superintendent, to succeed Zenos E. Scott. Mr. Scott has resigned in order to accept the presidency of the Bridgewater State Teachers' College.

• MR. J. B. STOUT, formerly head of the education department of the State Teachers' College, Weatherford, Okla., has been elected superintendent of schools at Norman.

### MISS STOUT DIES

Miss Amanda E. Stout, superintendent of schools of Reading, Pa., died suddenly in a local hospital, on May 6, following a heart attack. She was 68 years old.

Miss Stout started her educational career as a teacher and was successively supervisor, assistant superintendent, and superintendent of schools. In 1913 she had charge of the affairs of the schools during the illness of the late Superintendent Foos. She was acting superintendent for three years until 1916, when she became assistant superintendent. In 1929, following the resignation of Superintendent Landis, she was elected superintendent of schools to fill the unexpired term of Mr. Landis.

Miss Stout was a member of various educational organizations. She was the organizer and first president of the eastern district of the Pennsylvania Education Association and was a trustee of the Kutztown Teachers' College.

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Modern classroom instruction requires greater flexibility of space and equipment. The No. 260 Steel Movable Desk has been designed to meet these present-day needs and provides the utmost utility and durability in school seating. It is fully adjustable, having separate, simple clamp adjustments for effectively holding seat and writing top rigidly in place. For greater silence, desk top has compact friction hinges and seat has ball bearing swivel. Supports, legs and book box of steel, with wood desk top and saddle seat, are all finished in school furniture brown.



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NORTH MANCHESTER, INDIANA

### ADJUSTING SCHOOL OPERATION TO A REDUCED BUDGET

(Concluded from Page 24)

regular inspections, scheduling the duties of the janitors, and rating the condition of the buildings. Each year, prizes are presented by the business manager to the janitors in the high, junior high, and elementary schools, awarding first and second prizes in each group, for the cleanest schools. We find that this stimulates effort in the performance of the work, and arouses interest in the educational personnel and the pupils.

#### Floor Maintenance

One of the universal problems in the maintenance of school buildings is the care of floors. For a number of years we have been working continuously on this matter. For the new buildings which have hardwood floors, I believe that we have found a very good solution of the problem. When the hardwood floor is installed it is treated with a good floor preservative of a penetrating type, costing approximately ten cents per square yard. Then the judicious use of a good bleaching solution, together with an oil treatment about twice a year, will keep the floor in perfect condition.

The proper oil treatment is the secret of the success of this method. All oil for routine treatment must be exceedingly thin, with a nonparaffine base, and the application must be made very carefully. The floor is first swept and all spots are removed. Then with an ordinary mop and mop bucket the oil is applied like water and is mopped on in the same manner. The space to be treated must not exceed more than a 10 or 12 ft. square at a time, and the mop to start with should be only damp. After the first application, the floor must be dried as much as possible and all the excess oil removed immediately. Half a minute is sufficient for the oil to penetrate the wood to last for a long time. The cost of the oil varies from 10 to 20 cents a gallon, depending upon current prices, freight, and the quantity bought. The danger of this method of applying

oil lies in the fact that the workman may follow the line of least resistance and put oil on the entire floor of a room. This is not satisfactory, as too much oil is absorbed in the time elapsed.

In cleaning linoleum, our greatest success has been in the old-fashioned method of careful mopping.

For the daily cleaning of linoleum and hardwood floors which have been treated, the 26-in. wool or yarn mop is to a great extent replacing the floor brush or broom, and in the long run, proves to be a saving and keeps the floor in better condition.

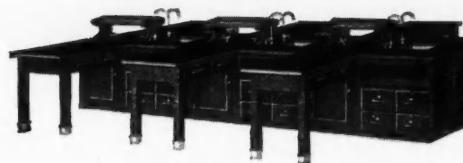
#### Engineers and Heating

The field in which the engineer may make savings for the school board, while not so large as that of the janitor, is just as important. One of the most important things is to see that the heating plants are mechanically in perfect condition. If not, the proper steps should be taken to have the same put in shape. Then the engineer must watch the room temperatures carefully to see that no more heat than is absolutely necessary is used, closing off the heat on the warm side of a building when not needed, and putting similar economies into effect.

We find that the engineers or firemen, where low-pressure boilers are installed, have enough time so that they may be spared for two hours a day away from the boiler room. In Los Angeles, all engineers are given definite duties which will keep them occupied for this full period, assisting the janitors. They also make minor repairs about the plant, and during the summer vacation and the period when it is not necessary to run the steam plants, they are used in making necessary repairs and helping on larger repair jobs at other schools.

#### Inspection of Buildings and of Janitors' Work

With our more than 400 school plants, we find it necessary to have several types of inspectors, whose duties to a certain extent overlap. This overlapping may be criticized as duplication. However,



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Art Table No. BL-90

The science department of the George Washington School, Lancaster, Pa., is completely equipped with Keweenee Laboratory Furniture.

we find it to be helpful, as a man going over the same type of equipment, etc., every day will pass by certain glaring defects or hazards, which a newcomer or one less familiar with the situation will notice at first glance.

Our first group of inspectors is termed "district foremen." The men are responsible directly for maintenance rather than operation. However, as the two terms are so closely interwoven, their inspection work includes general operation as well as maintenance, and they are the men who catch up the points overlooked by the inspectors of janitor service and heating and ventilation.

For the purpose of janitorial inspection, the city school district has been divided into two sections, with approximately 200 schools in each section. Each school is inspected every two months, and the inspector turns in, daily, a report on each school inspected, using a special form which serves to keep the office informed as to the condition of the schools, and the efficiency of the janitorial personnel. On the basis of these daily reports, the selection is made of the schools which are eligible for consideration in the awarding of the annual prize. It is the duty of these inspectors, also, to follow up emergency calls which may be turned in during the day.

We have in the division of heating and ventilating equipment two inspectors. One specializes in the care and adjustment of gas-steam radiators only. (We have approximately 6,500 in use in the system.) The other is the general inspector of steam-heating and ventilating systems. His duties are to see that the janitors in elementary schools, who operate heating plants, are familiar with their plants, and that the same are kept in repair. He also supervises the repairs of boiler plants.

For years it was customary to honor all requisitions from the schools for the replacement of electric-light globes, until our annual bill for this item reached a total of \$16,000 in 1926-27. At that time the relamping of the schools was turned over to our electrical division, and we find that a material saving has been effected. Last year, with more classrooms, the bill for globes was only \$9,000.

## HILD Floor Sander

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The last word in an electrically driven, light-weight, high speed floor surfacing machine. For removing paint, varnish and resurfacing large floor areas. Does exceptionally fine work, even though small in size (95 lbs.) and amazingly low priced.



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A handy reference guide to Floor Maintenance Operation and Material Schedules. Tells at a glance how, when and what to use and on what floor.



(Be sure to see the Hild Exhibit, Hall of Science, A Century of Progress Exposition, Chicago, 1933)

## REDUCING ELECTRICITY COSTS IN SCHOOLS

(Concluded from Page 16)

**TABLE I. Comparison Between Cost of Electricity for Burton and Ottawa Hills Schools, Grand Rapids, Michigan, During School Year 1927-28\***

	Burton	Ottawa Hills
Power plant . . . . .	Yes	No
Cube of building (cubic feet) . . . . .	2,951,000	3,043,000.
Tons of coal burned . . . . .	1,031.54	1,089.85
Electric current generated, kw. hrs. . . . .	61,260.	0.
Electric current purchased, kw. hrs. . . . .	9,218.	68,086.
Total current used, kw. hrs. . . . .	70,478.	68,086.
Cost of generating current . . . . .	\$ 1,595.74	\$ 0.
Cost of purchasing current . . . . .	\$ 448.54	\$ 3,730.56
Cost of generating current per kw. hr. . . . .	\$ .026	\$ 0.
Cost of purchasing current per kw. hr. . . . .	\$ .0486	\$ .0547
Cost of current used . . . . .	\$ 2,044.28	\$ 3,730.56
Total cost per kw. hr. . . . .	\$ .0289	\$ .0547

From the above it will be noticed that the Burton school used 1,392 kw. hr. more current than the Ottawa Hills school, and still made a saving of \$1,676.28. At the same rate per kw. hr. for Burton school as was paid for Ottawa Hills, the current would have cost \$3,847.10, so that the actual saving to the board was \$1,802.82, or about 46 per cent.

The cost of generating current is based on an installation cost of \$11,363, including the cost of the engine and generator, switchboard panel, electric wiring to board, foundation, feed-water heater, and building space occupied. The items of cost of operation include interest on the investment, depreciation, supplies and repairs, extra attendance, coal, and water. The plant should pay for itself in six to seven years, and is good for at least another four years.

Table I indicates the feasibility of a school-owned power plant by showing how one such plant saved the Grand Rapids schools more than \$1,800 during the year 1927-28.

Another Michigan city that was contemplating the installation of a school-owned power

plant was given lower rates by the local power company as an inducement to give up the idea. The lower rates resulted in an annual saving of more than \$4,500. The story of this particular case may be told as follows:

In this city there were four school buildings located on the site. In 1929, these buildings consumed 196,140 kw. hrs. of electricity, at a cost of \$7,756.60. A central heating plant, consisting of two high-pressure boilers of 550 h.p. each, was burning approximately 1,800 tons annually in producing 35,000,000 pounds of steam. A study of the power and steam charts showed that the demand for electricity coincided closely with the demand for steam, both for different periods of the day and different seasons. It was proposed that the steam from the heating plant be used for operating a generator, and then exhausted into the heating system, thus serving both as power and heat.

Data were gathered on the cost of installing generators and operating the proposed plant. A professor from the engineering college of the University of Michigan was employed to survey the local situation and to advise the board with regard to the proposed project. His conclusions indicated that the school-owned power plant is an economical investment and recommended that a plant be installed. At this point the local power company offered a new schedule of rates, with annual savings of more than \$4,500 since that time.

The installation of school-owned power plants has proved economical in only a limited number of cases where the consumption of electricity is sufficient to warrant the cost of the original investment, plus the annual costs for interest, depreciation, and operation. It is doubtful whether a plant can be installed to advantage unless the cost of the purchased electricity exceeds \$2,000 annually. Very few small schools find the school-owned power plant a profitable

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investment if electricity is otherwise available at reasonable rates.

## THE BREA-OLINDA PLAN FOR SCHOOL EDUCATION PLUS OCCUPATIONAL PREP- ARATION

(Continued from Page 23)

of each newly enrolled student, and complete outline of subjects and courses profusely distributed at the beginning of each semester.

The courses presented to the students include pre-engineering, home economics, nursing, commercial, secretarial, accountancy, art, music, electricity, drafting, automobile mechanics, aeronautics (ground school), machine work, welding and ornamental iron, and building trade. Journalism and business management are also given occupational slants.

Each occupational major may be studied in three degrees: occupationally, semioccupationally, or academically. According to the first, a student completes his four years of work with 14 occupational and 6 academic credits, by the second with 10 of each kind, and by the third with 6 and 14. The last two groups satisfy the entrance requirements of nearly all California institutions of collegiate grade. The terms used at present within the school are basic trade, academic-vocational, and liberal. Although the curricula are not on three levels, there is some natural selection without sacrifice of quality work in any one.

## ORGANIZED PLAY AND RECREATION IN NEWARK, NEW JERSEY

(Continued from Page 26)

### The Present Staff Organization

The present staff of the department consists of the director of recreation; two assistants—

(Concluded on Page 62)

WITH STEEL FRAME  
CONSTRUCTION YOU  
GET Extra Safety  
AT NO Extra Cost

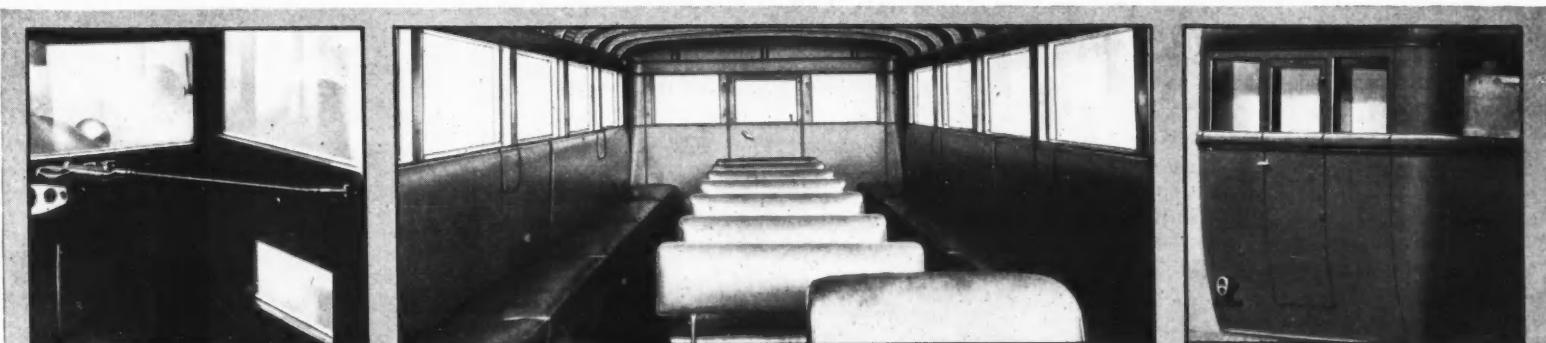
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The seating arrangement shown is adapted to most school transportation needs. Other seating plans are available to meet special requirements.

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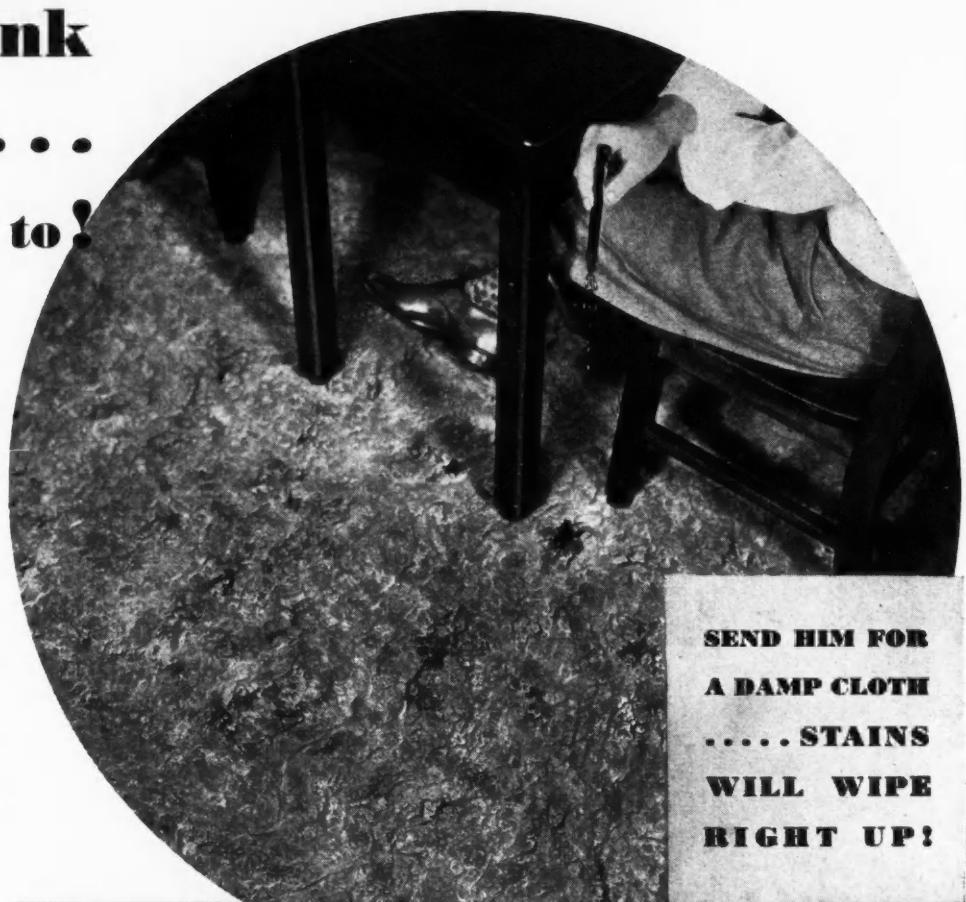
Address Armstrong Cork Company, Floor Division, 1212 State Street, Lancaster, Pennsylvania.

(Concluded from Page 60)

one a man, responsible for the development of athletics and one a woman, responsible for the development of balanced programs in the playgrounds and centers; and 56 permanently employed recreation directors and leaders assigned to the different centers. Each of seven Class A playgrounds and recreation centers has a staff of three permanently employed leaders, a director, a woman assistant, and a man assistant. In addition to this staff the director is allowed \$350 a year to employ additional part-time workers in the community center. Each of two Class A playfields has a permanent staff of one director with additional part-time help throughout the year. Each of thirteen Class B playgrounds has a permanent staff of two—a director and a woman assistant. Each of seven Class C playgrounds has a woman director assigned permanently and an additional leader at certain seasons of the year.

In addition to this staff employed on a yearly basis are the part-time people employed as directors and helpers in the athletic centers; the officials for the various games; the physical-education teachers employed to conduct the intramural program of the schools in the afternoon; the shop teachers; cooking and sewing teachers; as well as the additional playground workers on Class D and summer playgrounds. All of these total in the course of the year some 160 individuals.

The principal of each school building used in the recreational program has full authority for his school building and playground at all times. The recreation director in each center is expected to consult with the principal once a week on his program and to provide him with his weekly forecasts and programs. The principal is also required to report to the superintendent of schools once each term on the efficiency of his recreation staff.



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*for every school and college*

### Policies and Control

The policies for the entire recreation program are formulated by the director of the recreation department and he is responsible for the general supervision of the entire program. It is also his responsibility to keep in close contact with all recreational activities in the city and aid and advise in recreational matters when it is within his power to do so. He must also aid in maintaining the closest co-operation between the board of education and the character building, social, civic, and welfare agencies of the city as well as the city and county park systems.

Although the main program of the recreation department revolves around school facilities throughout the twelve months of the year, the activities of the department are not confined solely to school property. All playgrounds and recreational activities conducted on the city parks come under the supervision of the recreation department of the board of education. Many of the activities of the department are conducted upon facilities under the control of the Essex County Park Commission. Such facilities are secured by the recreation department by permits from the Essex County Park Commission. As a matter of convenience, all requests for permits from schools or school children for use of facilities under the control of the Essex County Park Commission are cleared through the recreation department of the board of education. Co-operation is maintained with such organizations as the Boy and Girl Scouts, the Y.M.C.A. and the Y.M.H.A. Playground leaders encourage the formation of scout troops on the playgrounds, and the church and Sunday-school leagues are included in the leagues using the athletic centers.

In every way the efforts of the director and staff of the recreation department of the board of education are directed toward the promotion

and direction of worth-while leisure activities to meet the play and recreational needs of the city.

### THE JAMES FORD JUNIOR-SENIOR HIGH SCHOOL, CLEVELAND, OHIO

(Concluded from Page 35)

material in this building have passed all expectations, the idea being to obtain perfect reception for radio instruction and hearing and teaching comfort.

The amounts of the contracts for the construction were as follows: General trades, \$494,860; Heating and ventilating, \$88,854; Plumbing, \$37,157; Electrical, \$46,648; Elevator, \$2,965; Total for main trades, \$670,484.

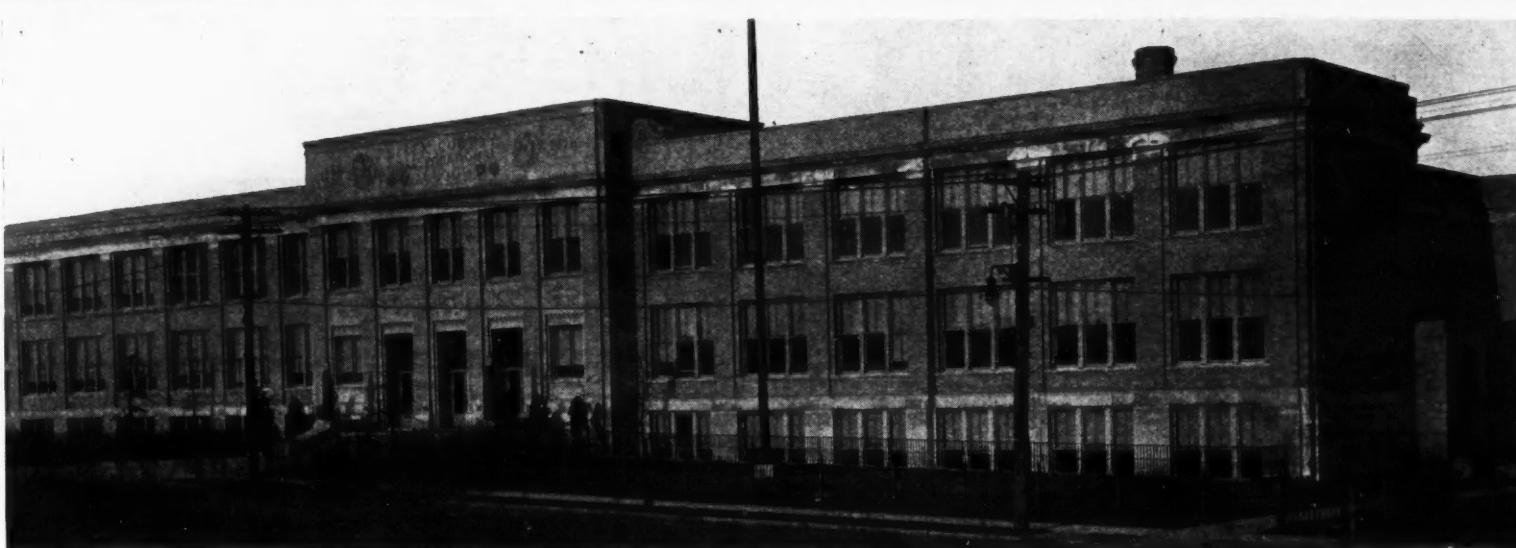
### CHECK LIST FOR ECONOMIES IN PUBLIC-SCHOOL ADMINISTRATION

(Continued from Page 32)

- 7.. Have combination of classes and supervised correspondence study through individualization been investigated, as means of reducing instructional costs, and at the same time enriching the curriculum?
- 8.. Is there justification for all courses now being offered?
- 9.. Are any provisions made to reduce the number of pupil failures which require additional costs for re-education?

#### Teacher Load and Class Size

- 1.. Have teachers been given larger classes to instruct when this has not lowered the efficiency of results?
- 2.. Are teachers handling as many classes as possible without overloading them?
- 3.. Are the teachers' work schedules arranged in the light of their individual jobs so that adjustments may be made for courses requiring different degrees of outside preparation and attention?
- 4.. Have certain required courses in high school been made elective, thus resulting in more economical class-size arrangements, without reducing the effectiveness of the educational program?
- 5.. Has the possibility of reducing the number of small



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classes by alternating certain subjects from year to year been considered?  
6.. Have grade teachers with small classes been given two grades to instruct rather than one?  
7.. Are grade combinations flexible, permitting year-by-year rearrangement of grades, so that each teacher has a pupil load and a distribution of grades that may be instructed efficiently?  
8.. Have efficient and economical class sizes been arranged by changing school-district boundaries and transferring pupils from one school to another?  
9.. Have certain elective courses been dropped from the high-school curriculum, without particular loss if the classes have been too small to warrant the cost?  
10.. Have changes been made in the requirements of accrediting associations and institutions of higher learning permitting local schools to adjust their programs to effect economies?

### Textbooks

- 1.. Are textbooks furnished the pupils,
  - a)... In the elementary grades?
  - b)... In the secondary grades?
- 2.. If textbooks are provided, are accurate records kept to show who has them in their possession?
- 3.. If textbooks are lost or misused, are pupils required to pay for the loss or damage?
- 4.. Are pupils instructed in the care of books to prevent abuse?
- 5.. Are pupils forbidden to write in school-owned books?
- 6.. Are paper covers provided for textbooks?
- 7.. Are textbooks kept in a constant state of good repair?
- 8.. Is the life of textbooks increased by having them re-bound as the occasion demands?
- 9.. Are school-owned textbooks designed for more than a single grade changed from one grade to another so that different parts of the book may be worn out?
- 10.. Are sets of books transferred from one school to another, or from one room to another, when used for only short periods of the year, so that they are kept in constant use, thus eliminating the need of purchasing additional sets?
- 11.. When textbook selections are adopted, are they used for a reasonable period of time (not less than three years) avoiding frequent changes before books are worn out?
- 12.. Have the alleged advantages of state-printed textbooks been carefully scrutinized, to determine whether or not this arrangement is really economical and efficient?

- 13.. Are school officials making minimum requests for free-sample textbooks?
- 14.. Are workbooks, drawing books, and laboratory manuals so utilized that they may be used by a number of pupils, without lowering the efficiency of instruction?
- 15.. Are certain periodicals purchased for only the length of the school year when the full-year copies are not required?
- 16.. Are reference books or periodicals purchased out of school funds only when the expense should not be assumed by those who use the material?
- 17.. Are books purchased directly from the publishers when this entitles the school to a discount?
- 18.. When the pupils are required to purchase their own textbooks,
  - a)... Does the school operate a bookstore where pupils may purchase books at cost?
  - b)... Is a book exchange operated giving pupils an opportunity to sell or purchase used books?
  - c)... Is a plan arranged so that pupils may rent textbooks, instead of buying them outright?

### Commencement Activities

- 1.. Has the possibility been considered of reducing the programs by substituting a different type of program, without using the traditional paid commencement speaker?
- 2.. Has the cost of diplomas been held to a reasonable amount by purchasing one of a suitable type and size?
- 3.. Are class rings, pins, and commencement announcements selected and purchased in such a manner as to obtain the lowest possible price consistent with requirements?
- 4.. Has the value of the traditional high-school annual been seriously questioned?
- 5.. Has an arrangement been made to reduce the cost of clothes for members of graduating classes?
- 6.. Has any effort been made to reduce the elaborate arrangements made for banquets and parties held in connection with commencement activities?

(To be continued)

## SCHOOL EQUIPMENT INVENTORIES

(Concluded from Page 41)

cerning the present condition of the equipment, the first cost of the article, the date of purchase, and the name of the company from which the equipment was purchased will be helpful.

Among the best forms for recording the inventory for a single year is that of Kansas City, Mo.,

which has a column in which the number of a given article on hand the previous year can be written. Other columns are: one for showing what equipment is needed, one for giving the amount suggested by the high-school committee, one for the number added this year, one for the total on hand, one for the list price, and one for the present value. In the column headed "added this year," any equipment which has been broken, or which has disappeared, is noted in red ink. In a wide column for listing the equipment, the size, the make, and the manufacturer's catalog number of each article are also given. Items are listed systematically according to departments and divisions under those departments. For instance, in the department of physics, the general divisions are: general equipment, mechanics, heat, magnetism, and so forth. Under each of these heads the equipment is listed alphabetically. This makes it possible to readily locate any piece of equipment on the inventory record. Items listed near each other are likely to also be so located in the laboratory, making checking convenient. Uniformity of entry in the reports from the different schools is assumed.

In Detroit, Michigan, a bound book, 9 1/2 in. by 12 in. in size is used. Provision is made in this blank for keeping the inventory up-to-date during the year. Columns are provided in which additions to the equipment and losses may be recorded as they occur.

One widely used form has provided space for the taking of the inventory for a number of years. Desirable continuity is provided in this form, which is weak, however, in other respects. The only fact which can be checked from year to year is the number of articles on hand. There are no columns to distinctly show each year the additions and losses, the condition of the equipment, or the year-by-year value of the equipment. If this value could be shown each year in separate columns, it could be totaled and the actual value each year and changes in value could be determined. It seems that the author of this form has sought compactness, low cost, and continuity, at the sacrifice of too many of the factors which would help to make an inventory useful.

In a later article a suggested form will be shown along with a suggested technique.



# SAFETY

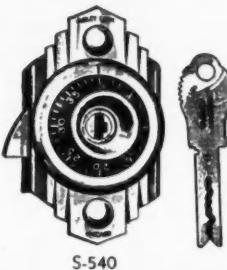
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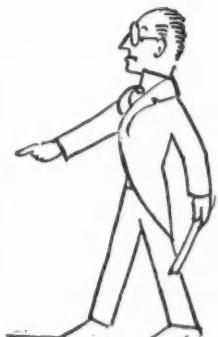
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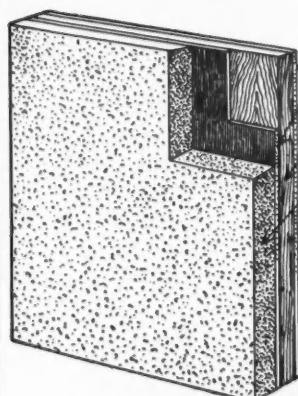
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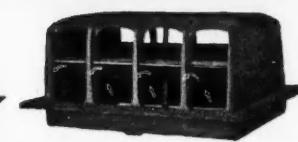
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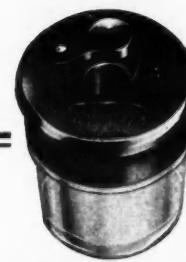
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# After the Meeting

## The Debt

Education is the debt eternal of maturity to childhood and youth. — H. A. L. Fisher.

## The Teacher Traveled

Teacher: I go to Europe every third year.

Principal: And how do you spend the other summers?

Teacher: Well, the first one I talk about last year's trip, and the next year I make plans for the following summer.

## Modern Student

"When our son has completed his studies what will he be?"

"A very old man!" — Vart Hem, Stockholm.

## Good Arithmetic

Willie was having trouble with arithmetic.

Said teacher, "How many do Daddy and Mother and Baby make?"

"Two and one to carry," said little blockhead Willie.

## Seats of the Mighty

Two young boys were telling about great deeds, when one who was a professor's son spoke up and said his father occupied the chair of applied physics at Cambridge.

"Dat's nutting," replied the other, "mine occupied the seat of applied electricity at Sing Sing."

## Putting Over a Swift One

Little Betty, returning from school one afternoon, said:

"Johnny Wilson's examination papers were so good that teacher keeps them on her desk to show visitors."

Asked about her own, she had to confess that they weren't good.

"But why aren't yours as good as Johnny's?" her mother asked. "You have the same opportunities."

"I know, mother," said Betty, "but Johnny Wilson comes from a very bright family." — San Francisco Chronicle.

## Fact is Fact

Teacher: Do you think George Washington could have pitched a dollar across the Rappahannock river, as he is said to have done?

Bright pupil: I dunno. It says in our history that Washington pitched his camp across the Delaware river when the British were pursuing him. — Pathfinder.

## Depression Economies

The stenographer owed the office boy two cents. One day she found one cent in her desk, so she said, "Here is one of the two cents I owe you." Now it happened that the office boy owed the bookkeeper two cents, so he handed him the one coin and said, "Now I just owe you one cent." By chance the bookkeeper owed two cents to the stenographer, so he in turn handed her the cent. "Well, here's the other cent I owe you," said she to the office boy, who, in turn, paid his debt to the bookkeeper, who passed it on to the stenographer. That's the principle of keeping money in circulation when times are bad. — The Business Woman.



HOW LONG WILL THE SCHOOLS BE MADE THE "STEP-CHILD"?

# Buyers' News

## PERSONAL NEWS

**Death of Henry Heywood Morrill.** Henry Heywood Morrill, vice-president and director of the Heywood-Wakefield Company, Inc., manufacturers of school and reed furniture, died on May 29, in the New York Hospital, New York City, following an operation for appendicitis on May 15.

Born in New York, of an old New England family, Mr. Morrill attended Harvard University, and soon after leaving school, became associated with Heywood Brothers & Company, which was founded 106 years ago by the Heywood family to which he was related. He had been successively vice-president and director of the company since its incorporation in 1921, and was head of the New York office at 516 West Thirty-fourth Street.

**Mr. Lamson Appointed.** Mr. Wm. I. Lamson has been appointed manager of the unit ventilator department of the B. F. Sturtevant Company, Boston, Mass. Mr. Lamson was formerly general manager of the Buckeye Blower Company, Columbus, Ohio.

## TRADE NEWS

**Crane Company Urges Plant Maintenance.** The Crane Company, 836 South Michigan Avenue, Chicago, Ill., has undertaken a nation-wide campaign to reawaken interest in the proper maintenance of mechanical plants in public and private institutions and in manufacturing establishments. The necessity for retrenchment in public and corporation expenditures has led to the universal reduction in maintenance appropriations. For three years mechanical plants have been operated on "starvation maintenance" and genuine economy has given way to immediate reductions in expenditures.

As a guide to officials responsible for mechanical installations, heating plants, etc., the Crane Company has issued a booklet entitled *Born to Retrenchment* calling attention to the existence of waste in insufficiently maintained heating and power plants and the need for new materials and new methods to eliminate waste. A second booklet entitled *After Three Years of Starvation Maintenance* points out a practical method of testing the efficiency and the upkeep of equipment in heating, power, and other piping installations.

Both booklets are extremely practical and will be of special interest to school business managers, superintendents of buildings, and schoolhouse architects, who are interested in the construction, equipment, and upkeep of school buildings.

**Vimlite Flexible Health Glass for Schools.** The Vitalite Company, 500 Fifth Avenue, New York City, has issued a special circular, No. 26A, describing the use of Vimlite glass for open-air classrooms, school greenhouses, conservatories, and the like.

Vimlite is a flexible health glass, made by imbedding zinc-coated screen cloth in a thick, transparent film of cellulose acetate, which transmits a high percentage of beneficial ultra-violet rays. Its primary use is indicated for sun and sleeping porches, and for playrooms where children are housed.

Architects and school authorities will be interested in this new material which is a valuable, healthful glass substitute and is available in rolls or shorter pieces.

The Vitalite Company will be glad to send any school official the name of their nearest dealer who can supply them with the material.

**Hauserman Movable Partitions for Schools.** The E. F. Hauserman Company, Cleveland, Ohio, manufacturers of movable steel partitions, has issued a new *Gold Book on Partitioning* — AIA-28A-3, describing its new types "T" and "R" partitions.

The booklet contains complete descriptions, details, specifications, and illustrations of a variety of partitions, including the new 4-in. flush-type, movable, steel "Masterwall" partition for school buildings. The partitions are an assembly of standard interchangeable units of steel, rigidly interlocked with concealed fastenings to form staunch, durable partitions with small, well-studied moldings properly placed and judiciously used. Doors are of hollow metal stiles and rails, welded into an integral unit. Panel units may be removed and doors put in their place. Floating-type doorframes permit the doors to be hung at uniform clearance with permanency. Door checks, master-keyed locks, transoms, grilles, ventilators, wickets, are a part of the standardized equipment.

The partitions are made in one hundred different colors, with reproductions of choice grains, all restful, quiet, and smart, and the finish is permanent.

Complete information and prices will be sent to any architect, or school official, who requests it.

**Knapp Information and Specification Data on Sanitary Metal Trim.** Knapp Brothers Mfg. Company, 605 West Washington Blvd., Chicago, Ill., has issued a new technical handbook, containing information and specification data on a wide variety of sanitary trim, including metal window trim, metal casing, door bucks, dado mold, chalk troughs and blackboard mold, corner beads, and base grounds.

The Knapp Company is a pioneer in the manufacture of metal trim for all kinds of public buildings. In addition to the line of sanitary trim, the company produces a large line of metal corner beads for the protection of plastered corners, a line of low-cost architectural metal trim for residences, apartments, and public buildings.

The handbook is compiled to be of service to the architect, engineer, builder, and school official, who desire complete and accurate information on metal trim for contemplated school buildings. A copy of the booklet will be sent to any architect, or school official, who requests it.

**New Sight-Saving Device.** The Theodor Kundtz Company, Cleveland, Ohio, has just placed on the market a novel sight-saving and health-building book holder for school use.

The new device has tilting and folding features which allow any ordinary book to be held at various angles and distances, to suit the pupil's focal requirements. When closed, the device is compact, occupying a space 8 1/2 in. long, 4 in. wide, and 3/8 in. thick. It requires a minimum of storage and is convenient for carrying about to classrooms, library, or home.

The sight-saving device has a number of the features of the Eclipse sight-saving classroom desk. It is intended to prevent eye troubles, to maintain correct posture, and to allow more room on the desk top for work and for classroom efficiency. Complete information and prices may be obtained by any school official upon request.

**New Sturtevant Rexvane Forced-Draft Fans.** The B. F. Sturtevant Company, Hyde Park, Boston, Mass., has issued its new catalog No. 391, illustrating the Rexvane forced-draft fans for use in school boiler rooms.

The catalog shows the modern trend in the design of fans and points out the basic requirements peculiar to small forced-draft fans. Each fan is of beaded roundabout construction, insuring tight casing and pleasing appearance, and the inlets are designed to prevent recirculation between wheel and casting. The blades are curved at the entering edge to meet the air flow and to insure a smooth flow from the inlet to the outer part of the wheel.

Complete information will be sent to any school official upon request.

**Announce the Thermochron, a Device for Temperature Control.** The Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., has recently begun the marketing of the Thermochron, a new instrument for temperature control, which combines time and temperature functions. It takes the place of the room thermostat and insures heat directly in proportion to the rate and amount of heat loss, so that it is capable of maintaining temperatures within a fraction of a degree of the setting of the pointer and eliminates objectionable overheating, underheating, and air stratification.

The Thermochron has many advantages never before obtainable in a single device. It maintains an unvarying room temperature, lowers temperature at night and restores it automatically in the morning, obviates winding or manual starting, maintains the right time, and effects a saving in fuel which makes the device an economic necessity.

Complete information and prices may be obtained by any school official, or architect, upon request.

**New Alundum Rubber-Bonded Safety Treads.** The Norton Company, Worcester, Mass., has announced a new Alundum rubber-bonded safety tread, a type of safety tread especially suitable for use on new and old stairways in school buildings.

The Alundum rubber-bonded safety tread is composed of Alundum aggregate, securely bonded in a reinforced base of hard, tough rubber. The features of permanent safety and durability which have made Alundum aggregate so popular in floor treads are now available in this replacement type of stair-tread unit.



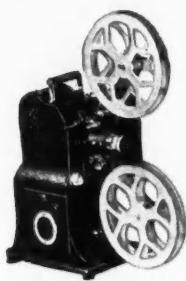
ALUNDUM RUBBER-BOND SAFETY TREADS

Alundum rubber-bonded treads are nonslip even at the nosing edge, an important feature, since the foot strikes the nosing when one descends a stairway. The new nonslip tread has a flat, level surface which prevents catching of heels or tripping.

The tread may be obtained in a variety of lengths and widths and may be placed directly over old or new wood, steel, concrete, or stone steps. Complete information may be obtained by any architect, or school official, upon request.

## NEW TRADE PRODUCTS

**New Stewart-Warner Motion-Picture Projector.** The Stewart-Warner Company, Chicago, Ill., manufacturers of home motion-picture equipment, has placed on the market a new 500-watt, 16-mm. projector, which is particularly suited for classroom work.

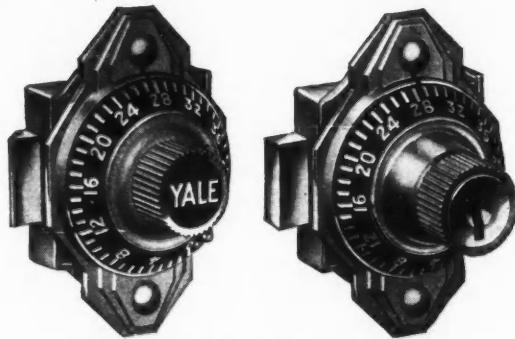


The New S-W Classroom Projector

The machine is equipped with a 500-watt lamp, providing powerful illumination and assuring pictures of professional brilliance and detail. Powerful a.c. and d.c. ball-bearing motors drive the projector at a constant speed and insure a surplus of power to drive both machine and sound mechanism when latter is attached. Operating controls are mounted on a neat panel at the back, which simplifies operation in a darkened room. A coupling for sound-mechanism drive, centralized oiling, pilot light, light weight, and compactness are some of its chief advantages. A fast rewind permitting 100 ft. of film to be rewound in 4 seconds, and an angle-tilting lever are recent improvements on the projector. The projector is inclosed in a neat, handy carrying case.

Complete information may be obtained by any school official upon request.

**New Yale and Towne Locks.** The Yale & Towne Mfg. Company, Stamford, Conn., has announced the marketing of two new locks, designed especially for school use.



THE NEW YALE SCHOOL-LOCKER LOCKS

Lock No. L-3369 is operated by a dial. Lock No. L-3379 is equipped with a master key and is designed for use on steel-box lockers. It has a latch bolt which automatically locks the door when it is closed, and disperses the combination.

A second lock, No. L-3378, is equipped with a master key, and lock No. L-3368 is the same lock operated by dial. This lock has been developed to take the place of the old flat-key type of lock in use for many years. It fits easily and quickly, and operates with a deadbolt by throwing the bolt to a locked position.

Both of these locks are equipped with automatic bolt release and are available either with cadmium- or chromium-finish dial and escutcheon. The dials are large and easy to read, and the combination in each case comprises three numbers. Complete information and prices are available to any school official who request them.

**New Miller Red-Dot Keyless Lock.** The J. B. Miller Keyless Lock Co., 200 Lock St., Kent, Ohio, has announced a new, specially constructed school and institutional lock, embodying all of the advantages of both the click and dial systems. The lock, which consists of five working parts, is extremely simple and sturdy in construction, has a large range of combinations, is strong, durable, attractive, automatic locking, and pickproof. It is easily operated in dark or dimly lighted places and is fully guaranteed. The casing is die-cast and the entire lock has a fine polished surface.

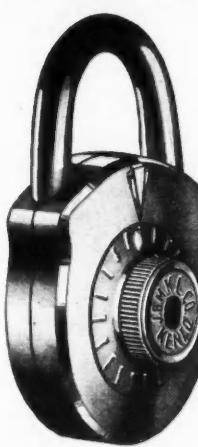
Complete information and prices on the Miller line of keyless locks may be obtained by any school official upon request.

**Kewaunee Announces New Laboratory Product.** The Kewaunee Mfg. Company, Kewaunee, Wis., has announced a new laboratory product, under the trade name of "Labtop Seal," sold in paste form. The new preparation is applied with a woolen rag to laboratory table tops and desk tops, as a finish and a preservative. It protects surfaces against acid and water stains and spots, and it also cleans and polishes. The use of "Lab-

top Seal" makes laboratory table tops last longer, improves their appearance, leaves a hard, dry, flexible working surface; reduces damage from acids, alkalies, and general reagents; and prevents complete refinishing or replacement. The material is sold in two-pound and five-pound cans, at very reasonable prices.

Complete information may be obtained by any school official.

**Hild Quick-Cutting Drum Sander.** The Hild Floor Machine Company, 108 West Lake St., Chicago, Ill., has announced a light-weight, quick-cutting drum sander for use in floor surfacing. The machine is covered with a special resilient rubber-cushion pad, has a  $\frac{1}{2}$ -h.p., ball-bearing, constant-speed motor, for attach-



HILD QUICK-CUTTING DRUM SANDER

ing to house lighting circuits and low voltage, and is equipped with d.c. or a.c. motors as desired. The Hild sander is portable, weighs only 80 pounds, and offers a definite saving in time and labor in the sanding of schoolroom floors.

Complete information and prices may be obtained by any school official upon request.

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# THE INDUSTRIES RECOVERY BILL

## and the

## "REGULAR SCHOOL TRADE"

*The statements we have been making in our several Bruce publications about the "Regular School Trade" were almost prophetic. The philosophy behind the Federal Industries Recovery Act is the finest kind of social planning. The school buyer will be surprised how far-reaching this legislation will be.*

*The jungle warfare in industry may soon be a thing of the past. The irresponsible seller must give way to the "Regular School Trade" or be licensed by Federal Government. The practical operation of the legislation will become apparent in a few weeks.*

*The school board who has always purchased on the lowest price irrespective of quality will find a new situation on price. In the first place prices will advance. Then the responsibility of the school buyer in supporting the "Regular School Trade" will set up a local responsibility parallel with the new federal legislation.*

*Yes, indeed, you, Mr. School Board Member and Mr. School Board Buyer, have a new responsibility. The lowest price is not your final deciding factor. It is now your responsibility to study merchandise, price ranges, merchandise quality, and the manufacturer and distributor who has been labeled O. K. by the Federal Government.*

*May we say another word for the "Regular School Trade?" We need no new competition, and we need no radical shifts in buying practices to accomplish our results. The Advertising pages of The AMERICAN SCHOOL BOARD JOURNAL have carried for years the story of the "Regular School Trade."*

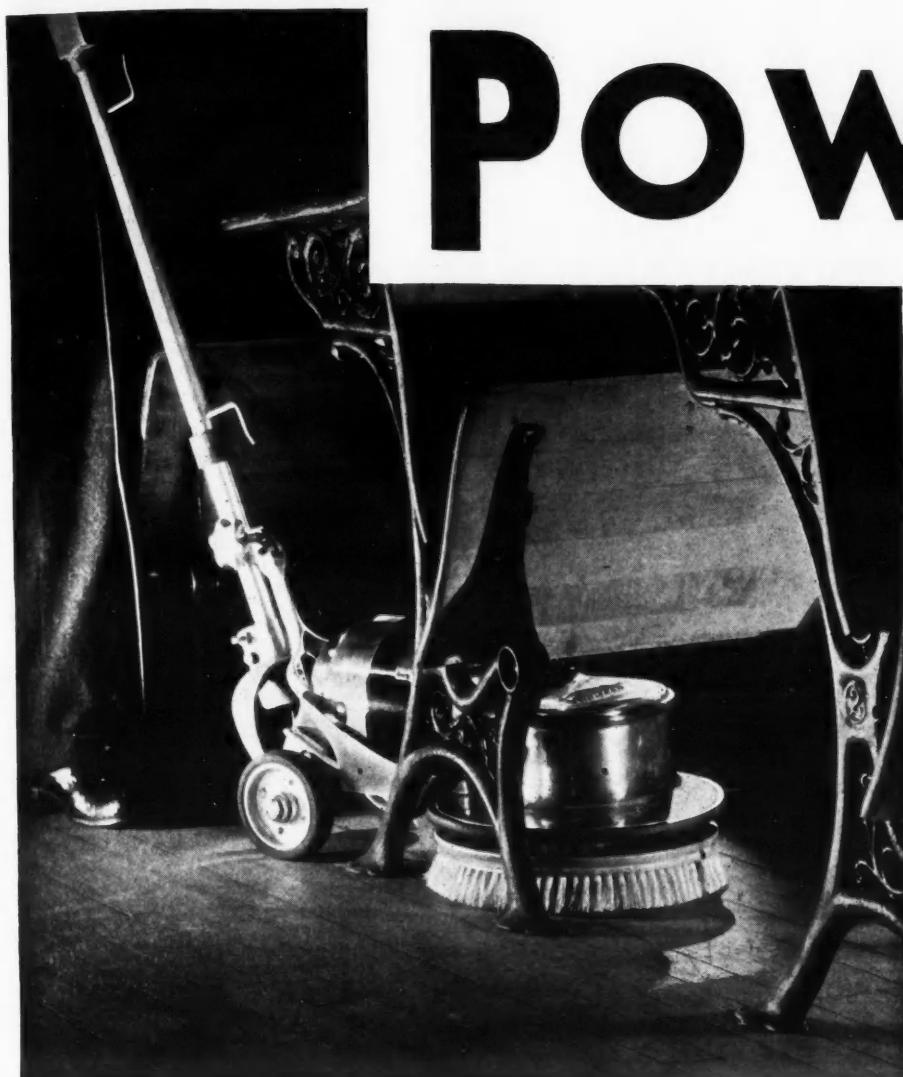
*We bespeak support of our advertisers as your best gesture in support of the President's Industrial Recovery Program. We have always attempted to place on the "Regular School Trade" the stamp of approval which the Government will now place on our co-operating American industry.*



*Frank Bruce*

Publisher

# SPEEDY! QUIET! and POWERFUL



THE NEW  
FINNELL **53%** MORE  
EFFICIENT

## DUAL USE INCREASES VALUE

The large No. 118 *Finnell* which has an 18" diameter brush also accommodates a brush of 11" diameter. Scrub or polish corridors, assembly rooms and other large areas and with the same machine clean in the classrooms, in and around stationary desks. For the school which can afford but one machine, this feature alone is worth the cost of a *Finnell*.

No wonder the new *Finnell* has been described as 53% more efficient than any previous *Finnell* . . . which means vastly more efficient than any other floor machine. Just the right weight . . . accurately distributed for greatest power . . . driven by a General Electric Motor . . . brush revolutions speeded to 230 per minute. Yet so noiseless it can be operated next to a busy classroom without the pupils hearing it. Generous-sized, heat-treated, hand-polished gears, of simplified design, running in large grease case, reduce noise to the very minimum.

Offset construction gives great flexibility . . . the new *Finnell* goes easily under desks, chairs and other school furniture.

Ask for details. Write for illustrated folder showing the new 100 Series *Finnell*. Free demonstration arranged at the convenience of school officials or board members. Address *Finnell System, Inc.*, 807 East Street, Elkhart, Indiana.



# FINNELL SYSTEM

OF FLOOR MAINTENANCE

*If children seem "backward"*



## Modernize with MAGNALUX LIGHTING

TIME after time, scientifically correct lighting has proved itself an effective aid in the classroom.

In actual schoolroom tests children have shown marked improvement in mental alertness under more effective lighting conditions.

In one study, two student groups, which tests showed to have equal ability, were assigned to separate rooms . . . one with lighting comparable to that found in most classrooms today; the other with adequate, automatically-controlled illumination.

Of the group handicapped by inadequate lighting, 38 per cent failed—while only 14 per cent failed in the room with scientifically correct illumination.

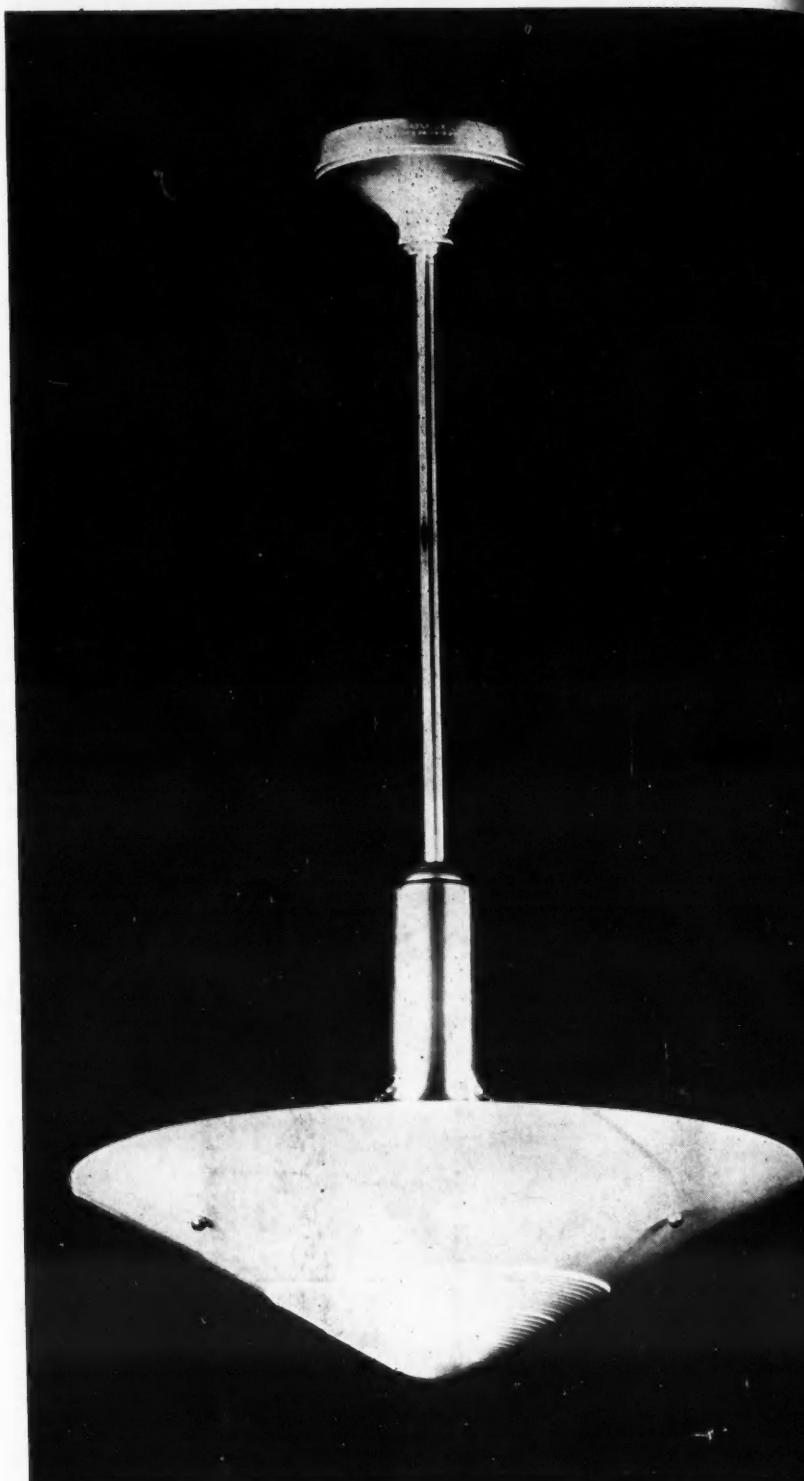
Too much care cannot be given to the selection of fixtures for classroom lighting. Glaring brightness or irritating dark spots cause eye strain and eye fatigue that lead to faulty vision.

Magnalux luminaires provide semi-indirect illumination that is ideal for sight conservation. They deliver light over a wide ceiling area, and softly diffuse it through hyperbola-shaped basins of Galax glass that permit no glare. So evenly is the light distributed, that the basins themselves blend harmoniously into the ceiling. They deliver a maximum amount of light at the desk level, and controlled by Photolux relays for automatic lighting during cloudy days, provide ideal illumination for classrooms.

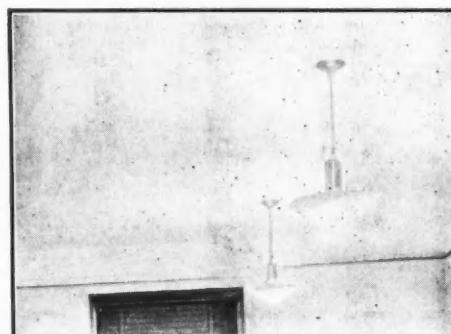
Let us send you more information about Magnalux lighting. Simply mail the coupon.

# Westinghouse

*Quality workmanship guarantees every Westinghouse product*



*The Magnalux Luminaires. This beautiful fixture provides highly effective illumination for the classroom.*



*Magnalux Luminaires distribute light evenly. Note how they blend into the ceiling.*

### SEND FOR INFORMATION

Westinghouse Electric & Manufacturing Company  
Room 2-N—East Pittsburgh, Pa.

Gentlemen: Please send me your literature on Magnalux Luminaires.

Name .....

Position .....

School.....

Address .....

T 7000

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